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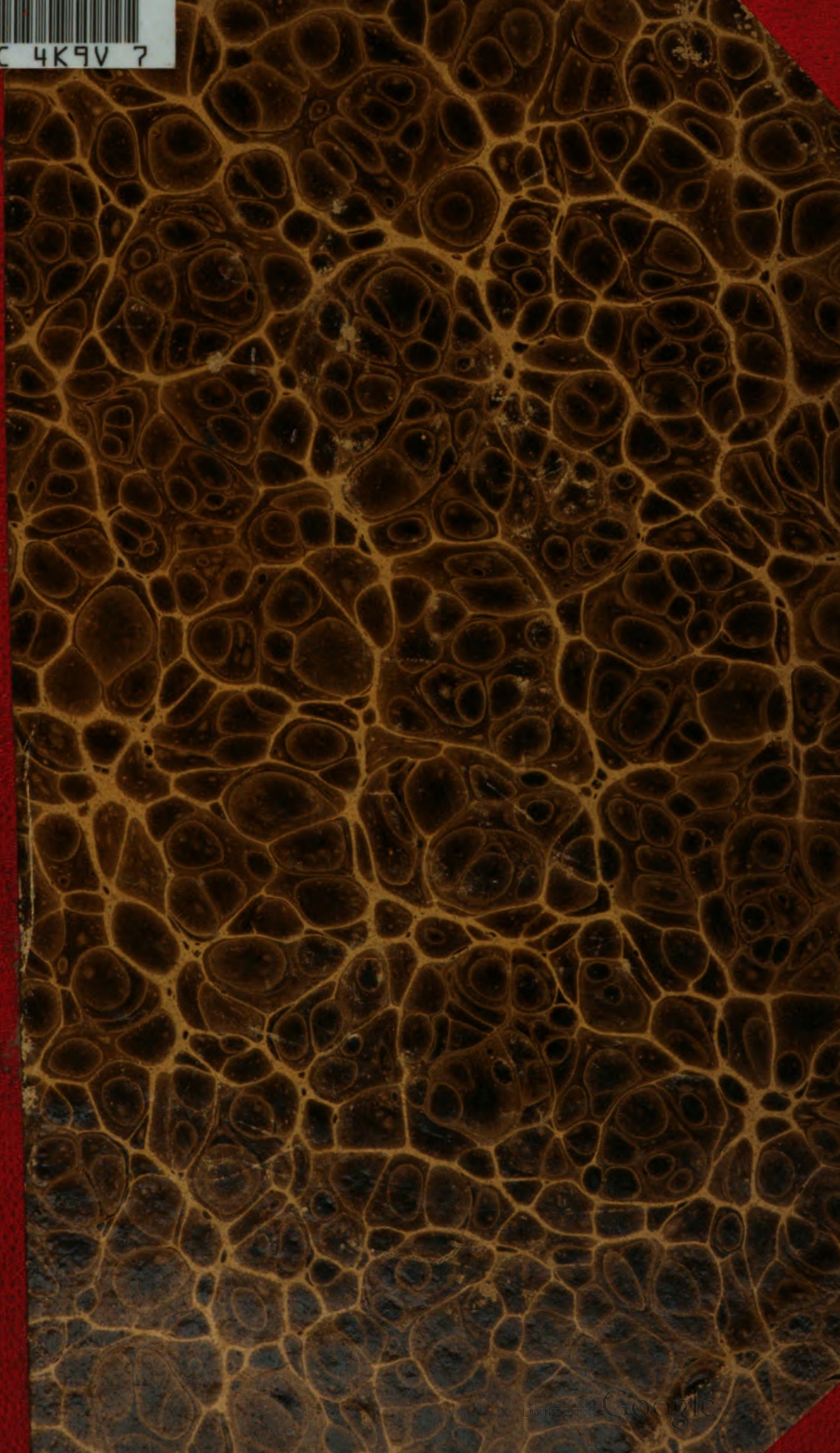
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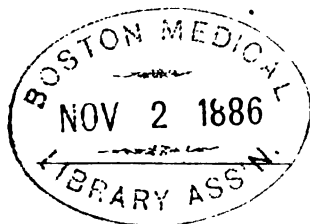
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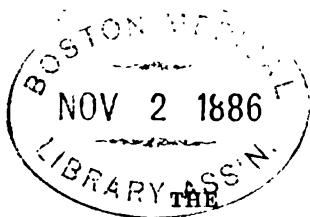
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JANUARY, 1868.

THE EARLY CONDITION OF MAN.*

By Sir JOHN LUBBOCK, Bart., F.R.S., President of the Entomological Society.

IN addition to the different opinions which have always been held as to whether man constitutes one or many species, there are two very different views as to the primitive condition of the first men, or first beings, worthy to be so called. Many writers have considered that man was at first a mere savage, and that our history has on the whole been a steady progress towards civilisation, though at times, and at some times for centuries, the race has been stationary, or even has retrograded. Other authors of no less eminence have taken a diametrically opposite view. According to them, man was from the commencement pretty much what he is at present: if possible, even more ignorant of the arts and sciences than now, but with mental qualities not much inferior to our own. Savages they consider to be the degenerate descendants of far superior ancestors. Of the recent supporters of this theory, the late Archbishop of Dublin was amongst the most eminent. In the present memoir I propose briefly to examine the reasons which led Dr. Whately to this conclusion, and still more briefly to notice some of the facts which seem to me to render it untenable. Dr. Whately enunciates his opinions in the following words:—"That we have no reason to believe that any community ever did, or ever can, emerge, unassisted by external helps, from a state of utter barbarism, into anything that can be called civilisation. Man has not emerged from the savage state; the progress of any

* Read before the British Association at Dundee, 1867.

community in civilisation, by its own internal means, must always have begun from a condition removed from that of complete barbarism, out of which it does not appear that men ever did or can raise themselves." One might at first feel disposed to answer that fifty cases could be cited which altogether discredit this assertion. Even without going beyond the limits of our own island, we might regard the history of England itself a sufficient answer to such a statement. Archbishop Whately, however, was far too skilful a debater not to have foreseen such an argument. "The ancient Germans," he says, "who cultivated corn, though their agriculture was probably in a very rude state, who not only had numerous herds of cattle, but employed the labour of brutes, and even made use of cavalry in their wars . . . these cannot with propriety be reckoned savages, or if they are to be so called (for it is not worth while to dispute about a word), then I would admit that in this sense men may advance, and in fact have advanced, by their own unassisted efforts, from the savage to the civilised state." This limitation of the term "savage" to the very lowest representatives of the human race, no doubt renders Dr. Whately's theory more tenable, by increasing the difficulty of bringing forward conclusive evidence against it. The Archbishop, indeed, expresses himself throughout his argument as if it would be easy to produce the required evidence in opposition to his theory, supposing that any race of savages ever raised themselves to a state of civilisation. The manner in which he has treated the case of the Mandans, a tribe of North American Indians, however, effectually disposes of this hypothesis. This unfortunate tribe is described as having been decidedly more civilised than those by which they were surrounded. Having then no neighbours more advanced than themselves, they were quoted as furnishing an instance of savages who had civilised themselves without external aid. In answer to this, Archbishop Whately asks—"First, How do we know that these Mandans were of the same race as their neighbours? Second, How do we know that theirs is not the original level from which the other tribes have fallen? Thirdly and lastly, supposing that the Mandans did emerge from the savage state, how do we know that this may not have been through the aid of some strangers coming among them—like the Manco-Capac of Peru—from some more civilised country, perhaps long before the days of Columbus." Supposing however, for a moment, and for the sake of argument, that the Mandans, or any other race, were originally savages and had civilised themselves, it would still be manifestly, from the very nature of the case, impossible to bring forward the kind of evidence demanded by Dr. Whately. No doubt he "may confidently affirm that we find no one recorded instance of a tribe of savages, properly so styled,

rising into a civilised state, without instruction and assistance from people already civilised." Starting with the proviso that savages, properly so styled, are ignorant of letters, and laying it down as a condition that no civilised example should be placed before them, the existence of any such record is an impossibility. Its very presence would destroy its value. In another passage Archbishop Whately says, indeed—"If man generally, or some particular race, be capable of self-civilisation, in either case it may be expected that some record, or tradition, or monument, of the actual occurrence of such an event, should be found." So far from this, the existence of any such record would, according to the very hypothesis itself, be impossible. Traditions are shortlived and untrustworthy. A "monument" which could prove the actual occurrence of a race capable of self-civilisation, I confess myself unable to imagine. What kind of a monument would the Archbishop accept as proving that the people which made it had been originally savage, that they had raised themselves, and had never been influenced by strangers of a superior race? Evidently the word "monument" in the above passage was used only to round off the sentence. But, says Archbishop Whately, "We have accounts of various savage tribes, in different parts of the globe, who have been visited from time to time at considerable intervals, but have had no settled intercourse with civilised people, and who appear to continue, as far as can be ascertained, in the same uncultivated condition;" and he adduces one case, that of the New Zealanders, who "seem to have been in quite as advanced a state when Tasman discovered the country, in 1642, as they were when Cook visited it, one hundred and twenty-seven years after." We have been accustomed to see around us an improvement so rapid that we forget how short a period a century is in the history of the human race. Even taking the ordinary chronology, it is evident that if in six thousand years a given race has only progressed from a state of utter savagery to the condition of the Australian, we could not expect to find much change in one more century. Many a fishing village, even on our own coast, is in very nearly the same condition as it was one hundred and twenty-seven years ago. Moreover, I might fairly answer that, according to Whately's own definition of a savage state, the New Zealanders would certainly be excluded. They cultivated the ground, they had domestic animals, they constructed elaborate fortifications, and made excellent canoes, and were certainly, in his sense, not in a state of utter barbarism. Or I might argue that a short visit like that of Tasman could give little insight into the true condition of a people. I am, however, the less disposed to question the statement made by Archbishop Whately, because the fact that many races are now practically stationary is in reality an

argument against the theory of degradation and not against that of progress. Civilised races, say we, are the descendants of races which have risen from a state of barbarism. Barbarians, on the contrary, argue our opponents, are the descendants of civilised races, and have sunk to their present condition. But Archbishop Whately admits that the civilised races are still rising, while the savages are now stationary; and, oddly enough, seems to regard this as an argument in support of the very untenable proposition that the difference between the two is due not to the progress of the one set of races, a progress which every one admits, but to the degradation of those whom he himself maintains to be stationary. The delusion is natural, and like that which every one must have sometimes experienced in looking out of a train in motion, when the woods and fields seem to be flying from us, whereas we know that in reality we are moving and they are stationary. But it is argued, "If man, when first created, was left like the brutes to the unaided exercise of those natural powers of body and mind which are common to the European and to the New Hollander, how comes it that the European is not now in the condition of the New Hollander?" I am indeed surprised at such an argument. In the first place, Australia possesses neither cereals nor any animals which can be domesticated with advantage; and in the second, we find, even in the same family, among children of the same parents, the most opposite dispositions—in the same nation there are families of high character, and others in which every member is more or less criminal. But in this case, as in the last, the Archbishop's argument, if good at all, is good against his own view. It is like an Australian boomerang, which recoils upon its owner. The Archbishop believed in the unity of the human race, arguing that man was originally civilised (in a certain sense). "How comes it, then," I might ask him, "that the New Hollander is not now in the condition of the European?" In another passage, Archbishop Whately quotes with approbation a passage from President Smith, of the College of New Jersey, who says—Man, "cast out an orphan of nature, naked and helpless, into the savage forest, he must have perished before he could have learned how to supply his most immediate and urgent wants. Suppose him to have been created, or to have started into being, one knows not how, in the full strength of his bodily powers, how long must it have been before he could have known the proper use of his limbs, or how to apply them to climb the tree?" &c., &c. Just the same, however, might be said of the gorilla or the chimpanzee, which certainly are not the degraded descendants of civilised ancestors. Having thus very briefly considered the arguments brought forward by Archbishop Whately, I will proceed to state, also very briefly, some

facts which seem to militate against the view advocated by him. Firstly, I will endeavour to show that there are indications of progress even among savages ; secondly, that among the most civilised nations there are traces of original barbarism. He supposes that men were from the beginning herdsmen and cultivators. We know, however, that the Australians, Tasmanians, North and South Americans, and several other more or less savage races, living in countries eminently suited to our domestic animals and to the cultivation of cereals, were yet entirely ignorant both of the one and the other. It is, I think, improbable that any race of men who had once been agriculturalists and herdsmen should entirely abandon pursuits so easy and so advantageous, and it is still more improbable that, if we accept Usher's very limited chronology, all tradition of such a change should be lost. Moreover, even if the present colonists of (say) America or Australia were to fall into such a state of barbarism, we should still find in those countries herds of wild cattle descended from those imported : and, even if these were exterminated, still we should find their remains, whereas we know that no trace of a bone either of the ox, the horse, or the domestic sheep has been found either in Australia or in the whole extent of America. So, again, in the case of plants. We do not know that any of our cultivated cereals would survive in a wild state, though it is highly probable that, in a modified form perhaps, they would do so. But there are many other plants which follow in the train of man, and by which the botany of South America, Australia, and New Zealand has been almost as profoundly modified as their ethnology has been by the arrival of the white man. The Maoris have a melancholy proverb that the Maoris disappear before the white man, just as the white man's rat destroys the native rat, the European fly drives away the Maori fly, and the clover kills the New Zealand fern. A very interesting paper on this subject, by Dr. Hooker, whose authority no one will question, is contained in the *Natural History Review* for 1864 :—In Australia and New Zealand, he says, for instance, the noisy train of English emigration is not more surely doing its work than the stealthy tide of English weeds, which are creeping over the surface of the waste, cultivated, and virgin soil in annually increasing numbers of genera, species, and individuals. *Apropos* of this subject, a correspondent says :—"T. Locke Travers, Esq., F.L.S., a most active New Zealand botanist, writing from Canterbury, says :—'You would be surprised at the rapid spread of European and foreign plants in this country. All along the sides of the main lines of roads through the plains, a *Polygonum*, called cow grass, grows most luxuriantly. the roots sometimes two feet in depth, and the plants spreading over an area from four to five feet in diameter. The dock (*Rumex obtusi-*

folius or *R. Crispus*) is to be found in every river bed, extending into the valleys of the mountain rivers, until these become mere torrents. The Sow-thistle is spread all over the country, growing luxuriantly nearly up to six thousand feet. The water-cress increases in our still rivers to such an extent as to threaten to choke them altogether.'” The Cardona of the Argentine Republics is another remarkable instance of the same fact. We may, therefore, safely assume that if Australia, New Zealand, or South America had ever been peopled by a race of herdsmen or agriculturalists, the fauna and flora of these countries would almost inevitably have given evidence of the fact, and differed much from the condition in which they were discovered. We may also assert, as a general proposition, that no weapons or instruments of metal have ever been found in any country inhabited by savages wholly ignorant of metallurgy. A still stronger case is afforded by pottery. Pottery is not easily destroyed; when known at all, it is always abundant, and it possesses two qualities—namely, that of being easy to break, and yet difficult to destroy, which render it very valuable in an archæological point of view. Moreover, it is in most cases associated with burials. It is therefore a very significant fact, that no fragment of pottery has ever been found in Australia, New Zealand, or the Polynesian Islands. It seems to me extremely improbable that an art so easy and so useful should ever have been lost by any race of men. Moreover, this argument applies to several other arts and instruments. I will mention only two, though several others might be brought forward. The art of spinning, and the use of the bow are quite unknown to many races of savages, and yet would hardly be likely to have been abandoned when once known. The absence of architectural remains in these countries is another argument. Archbishop Whately, indeed, claims this as being in his favour, but the absence of monuments in a country is surely indicative of barbarism and not of civilisation. The mental condition of savages seems also to me to speak strongly against the “degrading” theory. I have elsewhere pointed out that, according to the almost universal testimony of all writers on savages—merchants, philosophers, naval men, and missionaries alike—there are many races of men who are altogether destitute of a religion. The cases are perhaps less numerous than they are asserted to be, but many of them rest on doubtful evidence. Yet I feel it difficult to believe that any people which had once possessed a religion would ever have entirely lost it. Religion appeals so strongly to the hopes and fears of men—it takes so deep a hold on most minds—it is so great a consolation in times of sorrow and of sickness—that I can hardly think any nation would ever abandon it altogether. Where, therefore, we find a race which is now ignorant of religion, I cannot

but assume that it has always been so. I will now proceed to mention a few cases in which some improvement does appear to have taken place. According to M'Gillivray, the Australians of Port Essington, who, like all their fellow-countrymen, had formerly bark canoes only, have now completely abandoned them for others hollowed out of the trunk of a tree, which they buy from the Malays. It is said that the inhabitants of the Andaman Islands have recently introduced outriggers. The Bachapins, when visited by Burchell, had just commenced working iron. According to Burton, the Wajiji negroes have recently learned to make brass. In Tahiti, when visited by Captain Cook, the largest morai, or burial place, was that erected for the then reigning Queen. The Tahitians also had then very recently abandoned the habit of cannibalism, which we know was very common in other Pacific Islands. Moreover, there are certain facts which speak for themselves. Some of the North American tribes cultivated the maize. Now, the maize is a North American plant, and we have here, therefore, clear evidence of a step in advance made by these tribes. Again, the Peruvians had domesticated the llama. Those who believe in the diversity of species of men may endeavour to maintain that the Peruvians had domestic llamas from the beginning. Archbishop Whately, however, would not take this line. He would, I am sure, admit that the first settlers in Peru had no llamas, nor indeed any other domestic animal, excepting probably the dog. Another very strong case is the invention of the boomerang by the Australians. This weapon is known to no other race of men, with the doubtful exception of one Central African tribe. We cannot look on it as a relic of primeval civilisation, or it would not now be confined to one race only. The Australian cannot have learned it from any civilised visitors for the same reason. It is, therefore, as it seems to me, exactly the case we want, and a clear proof of a step in advance—a small one if you like—but still a step made by a people whom Archbishop Whately would certainly admit to be true savages. The rude substitutes for writing found among various tribes must also in many cases be regarded as of native origin. In the case of the system of letters invented by Mohammed Doalu, a negro of the Vei country, in West Africa, the idea was no doubt borrowed from the missionaries, although it was worked out independently. In other cases, however, this cannot, I think, be maintained. Take the case of the Mexicans. Even if we suppose that they are descended from a primitively civilised race, and had gradually and completely lost both the use and tradition of letters—to my mind, by the way, a most improbable hypothesis—still we must look on their system of picture-writing as being of American origin. Even if a system of writing by letters could ever be altogether lost—which I

doubt—it certainly could not be abandoned for that of picture-writing, which is inferior in every point of view. If the Mexicans had owed their civilisation, not to their own gradual improvement, but to the influence of some European visitors, driven by stress of weather or the pursuit of adventure into their coasts, we should have found in their system of writing, and in other respects, unmistakable proofs of such an influence. Although, therefore, we have no historical proof that the civilisation of America was indigenous, we have in its very character evidence, perhaps, more satisfactory than any historical statements would be. The same argument may be derived from the names used for numbers by savages. I feel great difficulty in supposing that any race which had learned to count up to ten would ever unlearn a piece of knowledge so easy and yet so useful. Yet we know that few, perhaps none, of those whom Archbishop Whately would call savages, can count so far. No Australian language contained numerals for any number beyond four; the Dammaras and Abipones use none beyond three; some of the Brazilian tribes cannot go beyond two. In many cases when the system of numeration is at present somewhat more advanced, it bears on it the stamp of native and recent origin. Among civilised nations the derivations of the numerals have long since been obscured by the gradual modification which time effects in all words, especially those in frequent use, and before the invention of printing. And if the numerals of savages were relics of a former civilisation, the waifs and strays saved out of the general wreck, though we could not expect to trace them up to that original language which in such a case must have existed, yet we certainly should not find them such as they really are. I cannot, of course, give to this argument all the development of which it is capable, but I will quote a short passage from a very interesting lecture delivered before the Royal Institution, by my friend, Mr. Tylor, in which some of the facts are clearly stated, and with an authority which no one will gainsay:—Among many tribes of North and South America and West Africa are found such expressions as—for five, “a whole hand;” and for six, “one to the other hand;” ten, “both hands;” and eleven, “one to the foot;” twenty, “one Indian;” and twenty-one, “one to the hands of the other Indian;” or for eleven, “foot one;” for twelve, “foot two;” for twenty, “a person is finished;” while among the miserable natives of Van Diemen’s Land the reckoning of a single hand—viz., five, is called *puganna*, “a man.” For displaying to us the picture of the savage counting on his fingers, a being struck with the idea that if he describes in words his gestures of reckoning, these words will become a numeral, perhaps no language approaches the Zulu. Counting on his fingers, he begins always with

the little finger of his left hand, and thus reaching five, he calls it "a whole hand;" for six, he translates the appropriate gesture, calling it *tatisitupa*, "take the thumb," while seven, being shown in gesture, by the forefinger, and this finger being used to point with, the verb *komba*, "to point," comes to serve as a numeral expression, denoting seven. Here, then, surely we have just the evidence which Archbishop Whately required. These numerals are recent, because they are uncorrupted, and they are indigenous, because they have an evident meaning in the language of the tribes by whom they are used. Again, we know that many savage languages are entirely deficient in such words as "colour," "tone," "tree," &c., having names for each kind of colour, every species of tree, but not for the general idea. I can hardly imagine a nation losing such words if it had once possessed them. Other similar evidence might be extracted from the language of savages; and arguments of this nature are entitled to more weight than statements of travellers as to the objects found in use among savages. Suppose, for instance, that an early traveller mentioned the absence of some art or knowledge among a race visited by him, and that later ones found the natives in possession of it. Most people would hesitate to receive this as a clear evidence of progress, and rather be disposed to suspect that later travellers, with perhaps better opportunities, had seen what their predecessors had overlooked. This is no hypothetical case. The early Spanish writers assert that the inhabitants of the Ladrone Islands were ignorant of the use of fire. Later travellers, on the contrary, find them perfectly well acquainted with it. They have, therefore, almost unanimously assumed, not that the nations had made a step in advance, but that the Spaniards had made a mistake; and I have not brought this case forward in opposition to the assertions of Whately, because I am honestly of the same opinion myself. I refer to it here, however, as showing how difficult it would be to obtain satisfactory evidence of material progress among savages, even admitting that such exists. The arguments derived from language, however, are liable to no such suspicions; but tell their own tale and leave us at liberty to draw our conclusions. I will now very briefly refer to certain considerations which seem to show that even the most civilised races were once in a state of barbarism. Not only throughout Europe, not only in Italy and Greece, but even in the so-called cradle of civilisation itself—in Palestine and Syria and in India—the traces of the stone age have been discovered. It may, indeed, be said that these were only the fragments of those stone knives, &c., which we know were used in religious ceremonies long after metal was in general use for secular purposes. This indeed reminds one of the attempt to account for the presence of elephants'

bones in England, by supposing that they were the remains of elephants which might have been brought over by the Romans. But why were stone knives used by the Egyptian and Jewish priests? Just because they had been at one time in general use, and there was a feeling of respect or reluctance to use the new substance in religious ceremonies. There are, moreover, other considerations which point very decidedly to the same conclusion. It is well known that among various savage tribes female virtue is looked on with a very indifferent eye. Some savages have not—I will not say have not arrived at—the idea of marriage. I cannot here bring forward evidence in support of this statement, but every one who has taken any interest in the lower races of men will admit that a savage's wives are essentially a part of his property, as much so as his dog or his slave; and hence, when a man dies, his brother takes possession of the widows, together with the rest of the property. In those cases, where women are treated with rather more justice, the first results are, according to our ideas, of doubtful advantage. Among the Andaman Islanders, for instance, the man and woman remain together only until the child is born and weaned, when they are free to separate and pair with others. In other cases, marriage may be terminated at the wish either of the husband or the wife. In others, again, the tie is of such a nature that it affords not even a presumption as to parentage. The result of this is, that many savages have no idea of any relationship by paternity; they recognise kinship through the female line only. This is the case with the Australians, the Fijians, and, indeed, the South Sea Islanders generally; the ancient Celts, Greeks, the Kasias, Nairs, and other tribes in Hindostan; some of the Cossack hordes, many negro tribes, etc., etc., while traces of it occur over all the world. For the same reason, a man's heirs are not his own children, but those of his sisters; while, probably again for the same reason, the Wanyamwezi have the (at first sight) inexplicable custom that a man's property goes to his illegitimate children, and not to his lawful offspring. Thus, then, by tracing up the gradual construction of the idea of marriage, we can account for the two extraordinary customs which we find in every part of the world—that a man is regarded as no relation to his own children, and that his property goes not to them, but to those of his sisters. As things improved, and the probability of parentage became greater, kinship through females only would gradually be abandoned. Many savages have not yet advanced so far, others have recently made the change—as, for instance, the Ait-Iraten, who did so less than a century ago, and erected a stone pillar in memory of the event. Even, however, among the most civilised nations, we find in early history traces of this progression. Thus, among the early Jews, Abraham married his

half-sister. Nahor married his brother's daughter, and Amram married his father's sister. Here we see the system of kinship through females only. These women were not at that time regarded as relatives, though at a later period in Jewish history they would have been so. The custom that when a man died childless his brother married the widow is another case in point, as also is the touching story of Ruth and Boaz. Similar considerations, as Mr. McLennan points out in his excellent book on *Primitive Marriage*, prove that the Romans were "at one time *in pari passu* as regards the administration of justice with many races, which we find ignorant of legal proceedings, and dependent for the settlement of their disputes on force of arms or the good offices of friends;" while, as regards marriage, we find customs both among the Greeks and Romans which point back to the time when those polished peoples were themselves mere savages. Even among ourselves a man is in the eye of the law no relation to his own children unless they are born in wedlock. He is related to his own offspring not by blood, but through his marriage with the mother. If marriage has not taken place they have no right to his name, and should he leave them any of his property, the State steps in and claims ten per cent., on the ground that they are no relations of his. Thus, then, we can trace up among races in different stages of civilisation every step, from the treatment of woman as a mere chattel to the sacred idea of matrimony as it exists among ourselves, and we find clear evidence that the gradual change has been one of progress and not of degradation. Civilised nations long retain traces of their ancient barbarism; barbarous ones no relics of previous chivalry. As the valves in the veins indicate the direction of the circulation, so can we trace the gradual progress of respect for women, which is one of the noblest features of our modern civilisation. Before quitting this interesting subject, I may add that many nations have traditions of the origin of marriage. Among the Egyptians it is attributed to Menes, among the Chinese to Fohi, the Greeks to Cecrops, the Hindoos to Soctaketu. If the idea of marriage had been coeval with our race, if marriage had always appeared as natural, I might say as necessary, as it does to us, such traditions could scarcely have arisen. In the publications of the Nova Scotian Institute of Natural Science is an interesting paper by Mr. Haliburton on "The Unity of the Human Race, proved by the universality of certain superstitions connected with sneezing." "Once establish," he says, "that a large number of arbitrary customs, such as could not have naturally suggested themselves to all men at all times, are universally observed, and we arrive at the conclusion that they are primitive customs which have been inherited from a common source, and, if

inherited, that they owe their origin to an era anterior to the dispersion of the human race." To justify such a conclusion, the custom must be demonstrably arbitrary. The belief that two and two make four, the division of the year into twelve months, and similar similarities, of course, prove nothing. But I very much doubt the existence of any universal, or even general, custom of a clearly arbitrary character. The fact is, that many things appear to us arbitrary and unaccountable because we live in a condition so different from that in which they originated. Many things seem natural to a savage which to us are unaccountable. Mr. Haliburton brings forward, as his strongest case, the habit of saying "God bless you," or some equivalent expression, when a person sneezes. He shows that this custom, which I admit appears to us at first sight both odd and arbitrary, is ancient and widely extended. It is mentioned by Homer, Aristotle, Apuleius, Pliny, and the Jewish Rabbis, and has been observed in Florida, in Otaheite, and in the Tonga Islands. That it is not arbitrary, however, Mr. Haliburton himself shows, and it does not, therefore, come under his rule. A belief in invisible beings is very general among savages, and while they think it unnecessary to account for blessings, they attribute any misfortune to the ill-will of these mysterious beings. Many savages regard disease as a case of possession. In cases of illness they do not suppose that the organs are themselves affected, but that they are being devoured by a god. Hence their medicine-men do not try to cure the disease, but to extract the demon. Some tribes have a distinct deity for every ailment. The Australians do not believe in natural death. When a man dies they take for granted that he has been destroyed by witchcraft, and the only doubt is who is the culprit. Now a people in this state of mind—and we know that almost every race of men is passing or has passed through this stage of development—seeing a man sneeze, would naturally and almost inevitably suppose that he was attacked and shaken by some invisible being. Equally natural is the impulse to appeal for aid to some other invisible being more powerful than the first. Mr. Haliburton admits that a sneeze is "an omen of impending evil," but it is more—it is evidence which, to the savage mind, would seem conclusive that the sneezer was possessed by some evil-disposed spirit. Evidently, therefore, this case, on which Mr. Haliburton so much relies, is by no means an "arbitrary custom," and does not therefore fulfil the conditions which he himself laid down. He has incidentally brought forward some other instances, most of which labour under the disadvantage of proving too much. Thus he instances the existence of a festival in honour of the dead, "at or near the beginning of November." Such a feast is very general, and as

there are many more races holding such a festival than there are months in the year, it is evident that in several cases they must be held together. But Mr. Haliburton goes on to say, "The Spaniards were very naturally surprised at finding that, while they were celebrating a solemn mass for All Souls on the 2nd of November, the heathen Peruvians were also holding their annual commemoration of the dead." This curious coincidence would, however, not only prove the existence of such a festival "before the dispersion" (which Mr. Haliburton evidently looks on as a definite event which took place at a definite time, instead of being a gradual process), but also that men were at that epoch sufficiently advanced to form a calendar and keep it unchanged down to the present time. This, however, we know was not the case. Mr. Haliburton again says—"The belief in Scotland and Equatorial Africa is found to be almost precisely identical respecting there being ghosts even of the living, who are exceeding troublesome and pugnacious, and can be sometimes killed by a silver bullet." Here we certainly have what seems to be an arbitrary belief, but if it proves that there was a belief in ghosts of the living before the dispersion, it also proves that silver bullets were then in use. This illustration is, I think, a very interesting one, because it shows that similar ideas in distant countries owe their origin, not "to an era before the dispersion of the human race," but to the original identity of the human mind. While I do not believe that similar customs in different nations are "inherited from a common source," or are necessarily primitive, I certainly do see in them an argument for the unity of the human race, which, however, be it remarked in parenthesis, is not necessarily the same thing as the descent from a single pair. In conclusion, then, while I do not mean for a moment to deny that there are cases in which nations have retrograded, I regard these as exceptional instances. The facts and arguments which I have here very briefly indicated might have been supported by many other illustrations which I could not specify without unduly extending a communication already somewhat too long. They, however, I think, afford strong grounds for the following conclusions—namely, that existing savages are not the descendants of civilised ancestors; that the primitive condition of man was one of utter barbarism; that from this condition several races have independently raised themselves. These views follow, I think, from strictly scientific considerations. We shall not, however, be the less inclined to adopt them on account of the cheering prospects which they hold out for the future. If the past history of man has been one of deterioration, we have but a groundless hope of future improvement; but, on the other hand, if the past has been one of progress, we may fairly hope that

the future will be so too; that the blessings of civilisation will not only be extended to other countries and other nations, but that even in our own land they will be rendered more general and more equable, so that we shall not see before us always, as now, multitudes of our own fellow-countrymen living the life of savages in our very midst, neither possessing the rough advantages and real, though coarse, pleasures of savage life, nor yet availing themselves of the far higher and more noble opportunities which lie within the reach of civilised man.

DISCUSSION.

The CHAIRMAN (Sir R. Murchison) said he was rejoiced that the members had, by their applause, shown their approbation of the paper they had just heard from Sir John Lubbock, one of the most eminent of all the men of science who were now leading what was called the new school as to the pre-historic antiquity of man. So far as his own particular studies went, he (the chairman) was convinced that there had been a great progression throughout all the works of nature; and, so far as he was capable of judging of the value of this communication of Sir John Lubbock's, he would say that geological evidences, at the end of the scale, as it were, where they terminated their explorations and investigations—those evidences which had been derived from the finding of those flint implements that had evidently been manufactured and used by man, and from the finding of other relics in caves associated absolutely with the remains of man—had given rise to this great school of pre-historic inquirers, of which he might say that Sir John Lubbock was quite at the head. This great class of inquirers had for some years held congresses over the continent of Europe in different places. They had held six or seven different meetings, and it was the intention of this International Pre-Historic Association or Congress to meet in Great Britain in 1868. He had only to say, that if they looked round this country they would not find a more fitting gentleman to preside over that International Congress than Sir John Lubbock.

Mr. CRAWFURD said he had listened with very great pleasure to the elaborate, ingenious, and interesting paper of Sir John Lubbock, and he had really hardly any objection to make to it. That was something new for him. He was rather surprised, however, that Sir John should have taken so much pains with the late Archbishop of Dublin, who had endeavoured to uphold what he would term a most abominable paradox, but he had laid the poor bishop on his back in very much the same manner as one would turn a turtle, and, as some people were inclined to think, that some other bishops would be none the worse of being treated. Still, the late Archbishop of Dublin, to whom he had had the honour of being presented, was a most learned and most ingenious man, and a valuable and a useful man, notwithstanding what he would still call his abominable paradox. The archbishop had stated that the New Zealanders and the Tasmanians were exactly in the same position when Tasman discovered these lands as they

were at the time of Cook, one hundred and fifty years later; and no doubt they were so, for they had no means of escaping from that position. If it had been possible to have met these people a thousand or ten thousand years before, they would have been exactly unchanged. They were not of very high capacity, although the New Zealanders were certainly of a higher capacity than the Australians; but they had no means of getting higher. They went as far as it was possible for them to go in the circumstances, and it was impossible for them to go higher. They had neither capacity for it, nor means nor opportunities; and if we ourselves are more advanced than the Australians, yet if we had neither corn, nor coals, nor metals, nor any of these means, we should have been savages to this hour. Aye, the very people of Dundee, now so far advanced, would have been no better than savages. But it is asked how could men subsist unless they had been somewhat civilised? His (Mr. Crawford's) own opinion was that, when they came into the world, they had nothing to support them. They were without language, and without any arts whatsoever; but they had brains, and they had hands, and these hands would soon be in possession of clubs, if these were only obtained by tearing off the branch of a tree. They would find the dead bodies of animals, and would eat them ravenously, and they would soon begin to kill the wild animals for themselves. The best account that had ever been given of this early state of man was that given by their friend Charles Darwin, whose eminent name was well known. He described the condition of things in Tierra del Fuego, which had been unvisited for hundreds of years; and from being ignorant of the existence of man the animals did not attempt to escape. The only exceptions were the travelling birds of passage, but they had no doubt seen human beings elsewhere. Mr. Darwin gave a most excellent account of how the natives of that country lived without clothing; and he (Mr. Crawford) would most strenuously recommend every one to read Mr. Darwin's account of his voyage in the South Pacific—it was the best book of travels that had been written for the last hundred years. He (Mr. Crawford) observed that it was mentioned that European breeds were largely introduced into New Zealand and New Holland, and they being stronger and more powerful than the breeds of these countries, were fast displacing them, just as the Europeans were displacing the native inhabitants. As an instance of this, he mentioned a particular kind of grass that had been introduced into New Holland from India some fifty or sixty years ago, and it was now spread over hundreds of miles of country. Then, as to religion, he believed that what might be called religion existed among all mankind, even among the very lowest class. It might not be religion as the word was popularly understood in this country; but the superstitious belief in demons, to which all evil was ascribed, was just a thing of the same kind. These superstitions existed universally. He never yet heard of a race of men who were without that kind of worship of demons, or who did not deprecate the wrath of higher beings. As to the numerals, Sir John Lubbock had stated that the Australians could count as high as four, but their four was just two twice over.

Then, as to the Malays, they were a very advanced people, relatively speaking. They could count as far as one thousand, but beyond that they had to use the Sanscrit or Hindu, which had higher numerals, and with these they could count as high as ever they pleased. As to the sneezing theory of Mr. Haliburton's *Sam Slick*, it was an old whim, and nothing else. When a person sneezed, some said "God bless you," and others said "Bismillah;" but the idea of tracing the races of man by the custom of sneezing, seemed to him (Mr. Crawford) to be perfectly ridiculous.

Professor Busk said he had unfortunately been unable to hear the commencement of Sir John Lubbock's paper, and therefore he was unaware whether Sir John had begun by defining what he meant by civilisation. That, he (Dr. Busk) thought, was a previous question, which should be settled before they could almost enter into the substance of this paper. The word civilisation might be explained in several ways. In one sense it might be regarded as the obtaining of a command over the powers of nature, and the invention and application of useful arts; but in another and a much higher sense, civilisation meant the cultivation of moral qualities and of intellectual pursuits. Now, when they regarded mankind from this last point of view, he thought the results would be very different from those which should be arrived at if they considered civilisation simply in the broad sense of the mere application of useful arts for purposes of ordinary life. In the higher sense of the word "civilisation," they had at the present time in the world perhaps three, but at all events two, distinct kinds of civilisation. They had the Chinese in the westward parts of Asia, the origin of which was lost in remote antiquity; they had, secondly, a civilisation in western Europe, and probably throughout Hindostan, though that might perhaps be a distinct centre, but at any rate it diverged at a very remote period from European civilisation. But the one to which he was particularly desirous of drawing attention, was the civilisation of Europe, which was drawn entirely from the Greeks—for all modern inquiry, even in the form of physical inquiry, was to be traced to the ancient civilisation of Greece. He thought that in one sense—that was the intellectual sense—the moderns had not advanced one single degree beyond the civilisation of ancient Greece—there had been no progress whatever in that respect. Of course, there had been a great acquirement of physical knowledge, and an abundant application of that knowledge to the useful arts. The condition of mankind had been very much improved in consequence; but the real essential civilisation of the human mind had not advanced, he supposed, in Western Europe from the time of Aristotle and Plato to the present. They reasoned in the same way as we do; they had almost the same moral sentiments—and the higher among them, those of Socrates, for instance, were equal to ours. There had been no advance in civilisation in that direction, so far as he (Dr. Busk) could see from the period of these great men, and probably for some time before it. The origin of this Greek civilisation was as yet a great mystery; but he thought he might say, expressing himself widely, that all the civilisation in the world with

which they were acquainted, leaving out the Chinese, was due to one source, whatever that source was, although it was lost, like that of the Chinese, in the remotest antiquity. They had no evidence of nations which had been debarred, from their geographical position and circumstances, from coming within the sphere of this Greek civilisation. They had no instance of any nations having become civilised except as they had come into contact with it since. The whole civilisation—or so called civilisation, which was merely the invention of industrial arts among savage nations, with the exception of a trifling influence of that kind—the whole of their advance was due to their contact with the European mind; he thought no one could deny that. He fully concurred with Sir John Lubbock in the assertion that these savage nations were not degenerated from any former condition of civilisation of any kind; but at the same time he was hardly prepared to admit that there was any evidence to show that savage nations had the power of advancing themselves by their own unaided intellect. They had a striking instance to the contrary in the case of the African continent, or rather that part of it south of the Great Desert. That part of Africa, of course, was quite cut off from the rest of the world, as well in modern as in ancient times. Those Ethiopian races had existed in Africa in vast multitudes, in some of the most fertile countries in the world, with every possible advantage of metals and minerals, and with abundance of animals which they might have tamed, and which other races than themselves had. He referred to the African elephant; the negro had never domesticated it, though it was perfectly capable of domestication. The negro was so stationary a creature, that he had never from the beginning of time invented an alphabet, or built a ship, or domesticated a single animal: he was as great a savage as he had been in the early dawn of his country. He had never been brought sufficiently in contact with European civilisation; but, even if he were, it seemed doubtful whether he would ever advance to be more than a mere copyist; but that he would never originate ideas, either moral or intellectual.

Sir WALTER ELLIOT, who spoke very inaudibly, was understood to ask Sir John Lubbock whether it was not the case that no race of men had ever been discovered who were not possessed of highly artificial language. It might be awkward in construction, and there might, perhaps, be great poverty of words, and a want of well digested and well prepared grammar; but it was almost impossible to conceive that savages gradually emerging from utter barbarism should be able to form a structure of grammar such as was to be found among them. There were instances of races falling from a high civilisation to a lower. He mentioned, in detail, several Indian races as an illustration of this, who had fallen from a state of high civilisation, and some branches of which were now among the most degraded sections of the people. He also related as a curious fact that an instrument like the boomerang of Australia was represented on some of the Egyptian monuments, and had evidently been in use among that people three thousand years ago.

The Rev. H. B. TRISTRAM said he did not intend to enter into an

argument with Sir John Lubbock as to the conclusions to which he had come, but he wished to suggest to him whether his statements and facts were not compatible with some other conclusion than that at which he had arrived. He most thoroughly and heartily agreed with Sir John Lubbock in the emphatic statement which he had put forth of the original identity of the human mind, and in the noble aspiration with which he concluded his most intensely interesting address; but at the same time he would suggest—and he was sure Sir John Lubbock would be the last man to object to give him a large draft on the bank of time—whether many races which had not yet risen might still rise to a higher place in the scale of civilisation. Professor Busk, for instance, had mentioned the case of the African. He (Mr. Tristram) thought the professor hardly did justice to the negro, for while on the Gold Coast and the Slave Coast even the commonest arts of life had been lost, and lost from the earliest time of which the Portuguese voyagers gave us any account of the Guinea Coast, yet in the interior of the country south of the Sahara, in the centre of Senegambia, many of those arts were found, such as malting barley, weaving and dyeing, and smelting iron. These arts certainly told of a civilisation which put the negro a little above the position in which Professor Busk would place him. But granting that the negro had as yet shown no aptitude for or power of invention, and that he had never risen without our help, was there not a time when the civilisation of the Greek race was far behind that of the Egyptian race? Did not history seem to say that there was some sudden start at some period? First, the Chinese civilisation, then the Assyrian, then the Egyptian, then the Greek civilisation, of which we are the successors, which had arisen at different periods, in different nations, perhaps independent of each other; but ever since these civilisations arrived at a certain height, Dr. Busk tells us, they have not advanced. Perhaps they did not; certainly the Chinese and the Assyrians did not advance, and the Egyptians were stationary for many ages. May not these other races have their turn to advance, if they have a sufficient draft on the bank of time, and produce, too, their Socrates and Plato? Then he thought Sir John Lubbock had hardly given sufficient allowance to one very probable way in which the islands in those distant regions were peopled. If the northern parts of Europe were peopled with outcasts from civilisation—if they were peopled with shipwrecked crews cast on shore in boats—was it not most probable that these individuals could not possibly, from the force of circumstances, on their first arrival preserve their arts; and then the very first terms of language that they would lose would surely be the abstract terms. While they would preserve the names of any particular tree, the abstract idea of a tree would be the very first that they would lose. He (Mr. Tristram) was submitting this on the hypothesis that there had been degradation, as directly opposed to Sir John Lubbock; he was submitting that it was true that Sir John's facts might be reconciled with the hypothesis of degradation, which he himself believed in most firmly. He never could see anything in the state of these savages which might not be easily accounted for by

their isolation; and the difficulty of the unity of language seemed to him to arise from the fact that as they lost their knowledge of the arts, they lost all terms of speech which represented those arts that they had forgotten. He did not see it was impossible to reconcile Sir John's facts with the fact of all barbarism being a degradation from a previous civilisation—not such a civilisation as we have at present, but such a civilisation as existed at present in Arabia, Armenia, and the plateau of Northern Asia.

Dr. JAMES HUNT said he had just one or two questions to put to Sir John Lubbock respecting his most interesting and valuable paper; but before doing so, he wished to say that he entirely disagreed with Professor Busk respecting his opinion that there had been no advance in the civilisation of the people of Western Europe during the last two thousand years. Two thousand years ago there were a small people who had arrived at a very high state of intellectual culture and civilisation, but it was no less true that that was confined to a very small portion of Europe, and that since that period it had extended throughout the whole area of the continent. They saw, then, a centre from which civilisation radiated; but there were, no doubt, other centres at this time from which a higher civilisation was again radiating, and possibly Dundee was one of these centres. With regard to his opinion that no savage race had advanced, that was also to some extent the opinion of the author of the paper. He had told them that there were several races who had raised themselves, but it was only a question of degree, and he understood Sir John Lubbock to mean that these savage races had raised themselves only to a certain position. With regard to the opinion advanced by Dr. Whately many years ago, he might mention that he (Dr. Hunt), when Secretary of the Ethnological Society, received a letter from the archbishop, asking him to bring the subject before the ethnologists of this country, and to request of them some reply to the doctrine he then advanced. He thought that, up to this time, there had been no real scientific satisfactory reply to the questions Whately had propounded. He said they never knew of any savages civilising themselves, and that, therefore, civilisation was the original state of man. Now, he (Dr. Hunt) was very much surprised when Mr. Tristram told them that, after this conclusive and exhaustive satisfactory and final answer to the question, and the facts there brought forward, that there was any member of the Association who would still advance the opinion which they had heard from Mr. Tristram, and that he still held that view. The facts brought forward by Sir John Lubbock appeared to his mind to be so conclusive that it would be utterly useless to attempt to argue or say anything more on the subject. Sir John seemed to have brought forward all the evidence in such a clear manner as to leave no mistake on the minds of those who were open to conviction that the original state of man was not certainly that which was depicted by those who believed it to be a high state of civilisation.

Mr. TRISTRAM—I did not say a high state.

Dr. HUNT—Mr. Tristram says he did not say a high state of civili-

sation, but that does not alter the question at all. The question still remains, and the facts that have been brought forward sufficiently prove, that the original state of mankind was not what can be called a state of civilisation. With regard to the unity of language of which Mr. Tristram spoke, he (Dr. Hunt) could not confirm such a theory. The progress of scientific inquiry with regard to that point at present showed that there were great diversities which could not be reconciled by any theory of unity. Mr. Tristram had told them that they must wait with regard to the civilisation of the negro and other savage races, but that was not science. They had to found science on facts which they at present knew. They were not called upon, before bringing forward a scientific theory, to say what might take place in the future. All they could do was to trace the history of the races in the past, and see according to that what were the theories to be propounded. Sir John Lubbock, in his paper, had very well said that there were several races without religion and without any idea of a God, as it was understood in Western Europe. But there were comparatively few who did not worship some evil spirit—some spirit which was equivalent to what was known in Western Europe under the name of the Devil. Possibly, Sir John Lubbock would state whether he knew of any race which did not worship some evil spirit or other. With regard to the original unity of the human mind, to which Sir John had alluded, he (Dr. Hunt) must confess his entire ignorance of what was intended. The original unity of the mind! what did that mean? Did Sir John Lubbock mean an original unity in the shape and the form and the size of the brain or the skull? If he did, then he (Dr. Hunt) must entirely differ from him; but if he meant an original unity of all animal life, then he for one had no objection to that expression; or if he meant to say the original unity of all organic nature, he should not raise the slightest objection to the words; but he should be very glad to know exactly what was meant by Sir John Lubbock with regard to the words, "the original unity of the human mind." With regard to the conclusions to which Sir John Lubbock had come, he entirely agreed with the first and second. As to the third, that several races had raised themselves, perhaps Sir John would kindly mention any race which had done so. He (Dr. Hunt) did not know at this moment of any race who had raised themselves since we first knew them, with the exception of the races of Europe. The whole races of mankind appeared to him to have derived their progress and their advancement in civilisation from the European races. Then Mr. Crawford had told them that there were men with brains but without language. He (Dr. Hunt) entirely differed from that statement. He did not think that the existence of such beings was even possible, judging from what was now known, that wherever you had brains there you had language, and it was just that great development of brain which was found in man that exactly corresponded to the development of language. To refuse means of communication between the lower animals in the present state of the inquiry was what he thought no scientific man would advance. That they had means of communication there was the best reason to suppose, and

therefore it was that he could not imagine that those beings could be called men when they were without language, because he did not think that with the brain that was possible. He had only to say, in conclusion, how heartily he agreed with the paper as a whole.

Sir JOHN LUBBOCK, in reply, said he thought the remarks which had fallen from Mr. Tristram and Dr. Hunt showed the necessity there was for his reference to the opinions of Archbishop Whately, which had been called in question by Mr. Crawford. In answer to the remarks of Mr. Crawford about religion, he would only repeat that many travellers had met with savage races who had no knowledge of religion. Professor Busk had asked him to define civilisation; perhaps the best definition he could give him was to say that he regarded Professor Busk himself as being a very good specimen of civilised man. After a brief reference to the remarks of Sir Walter Elliot and Mr. Tristram, Sir John said Dr. Hunt had asked him for some cases of nations who had raised themselves. He thought many might be given, but he would merely mention the Chinese, Mexicans, and Egyptians as three races who appeared to him to have raised themselves to a certain amount of what Professor Busk would still permit him to call civilisation, independently of any assistance from one another.

The discussion then terminated. The foregoing report of speeches, as well as Sir J. Lubbock's paper, is taken *verbatim* from the *Dundee Advertiser*.

DARWINISM IN GERMANY.*

SCHILLER speaking of Kant and his interpreters, says:—

“Wie doch ein einziger Reicher so viele Bettler in Nahrung
Setzt; wenn die Koenige bauen, haben die Kärner zu thun.”†

This distich applies singularly to the remarkable work of Darwin *On the Origin of Species*. It has been translated into most continental languages, has set the scientific world at loggerheads, and has stimulated the speculative and logical faculties of philosophers, naturalists, and anthropologists.

It is well known that the delay of Cervantes in publishing the second part of his famous *Don Quixote*, induced an anonymous scribbler

* *Der Mensch, seine Abstammung und Gesittung im Lichte der Darwin'schen Lehre, etc.*, von Dr. Friedrich Rolle, Frankfurt-a.-Maine, 1865. (Man, his origin and culture, by the light of Darwin's *Theory of the Origin of Species*.)

† “See how one *Crossus* feeds beggars in number.

When builders are royal, how active the carmen!”

to publish a spurious continuation of it, which was, however, speedily supplanted by the master publishing a sequel of his own. Mr. Darwin's book is expressly a preliminary work, an introduction to a more elaborate publication, in which what is there indicated as regards man will be fully, as we trust, developed; when, as he promises us, "psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity of gradation, and when light will be thrown on the origin of man and his history."

It is not, of course, our object in this place, to deal with Darwin's theory, but simply to express an opinion whether Dr. Rolfe has accomplished his task.

The work before us owes, as we learn from the prospectus, its origin to the favourable reception by the public of a treatise written by the same author, *On Darwin's Theory of the Origin of Species*. This encouraged him to expand the essay into a volume, by applying Darwin's doctrine to man, his descent, and mental development, etc.

The book is divided into six chapters. 1. Ancient and modern theories on the origin of man. 2. Hereditariness and variation. 3. Darwin's theory of the struggle for existence and natural selection applied to man. 4. Descent and development. 5. Races and varieties of the human species. 6. Geological history of the human species. It will thus be seen that, strictly speaking, there is but one chapter devoted to the application of the Darwinian theory, and on another occasion we shall revert to this chapter.

We briefly summarise a few of the conclusions arrived at by the author.

The origin of man and the development of his physical and mental capacity rest upon natural processes, and are the legitimate consequences of prior developments of living forms reaching back to the remotest periods of the history of the earth. In the words of Oken, "MAN IS DEVELOPED, NOT CREATED." Neither the body nor the mind of man renders the hypothesis of a direct creation of man from a lifeless matter necessary. Had not Lamarck's doctrine been ignored or ridiculed, Darwin's theory—which is engendered by it, reappears in a different form, and is supported by more incisive scientific experiments—would not have touched to the quick certain authorities in science. After the lapse of millions of years, we may be unable to trace the development process, but the progress from the ovulum to the developed organism, the development from the cell to the mature state, is patent. All acquisitions of modern science indicate the development from the simple to the compound, and the eternity of matter and force. The fossils in the geological archives are the ancestors of man. The geological history of the earth shows that the

vast number of forms which we systematise under classes, orders, families, genera and species, have not existed at all times, but have appeared in the course of long periods, and that the more perfect types appeared later, and man latest of all. It is clear that such a progress does not indicate creation from lifeless matter, but a development and transmutation.

The geological records are no doubt full of gaps; many former living forms have in the course of time been destroyed, but we are fully justified in anticipation of future discoveries to bridge over these blanks.

Dr. Rolle, we believe, lays no claim to originality. We have, at all events, been unable to find any new arguments, nor are the subjects discussed placed before the reader in a new light. The author is moreover, to judge from many slips, evidently not perfectly familiar with the current literature on anthropology. We find, therefore, Blumenbach and Prichard quoted at greater length than the avowed object of the work warrants; even the customary five races of mankind in appropriate costume, taken from Lawrence's *Lectures on Comparative Anatomy*, adorn the title-page. The work, therefore, derives its value neither from the information it conveys, nor from the vigour with which an important hypothesis is worked out. The great recommendation of the book is, that it is written in an easy style; that the well-known subjects, such as transmission of characters, acclimatisation, variation, etc., are presented in a condensed but very readable form. We believe, therefore, that as a little handbook on the more prominent problems of anthropology, it will and deserves to become popular.

We are especially anxious not to do Dr. Rolle any injustice; for we believe that his book is calculated to do much good. It is by such popular works that scientific superstition will be destroyed. The author writes avowedly for a popular audience, but does not attempt to beguile his readers with long meaningless sentences or evasive statements. The work is a very fair compilation on a very difficult and interesting question, and did space permit, we might be tempted to present a translation of it to our readers. On this occasion, however, we can only find room for the translation of the introduction, which runs nearly as follows:—

“The earliest histories of peoples as we find them in the historical and religious records of Indians, Persians, Egyptians, Hebrews and Greeks, afford no satisfactory clue to the *origin of man*. A variety of ancient theories and interpretations, more or less in accordance with the thinking and sensitive nature of man, have indeed reached us, but they are unsatisfactory, as they do not accord with our present knowledge of the immutable connection between cause and effect. We thus arrive at the conviction that the human species now existing,

furnished as it is with an accumulation of facts acquired by the progress of science, is perfectly justified in attempting the solution of the old problem by a method of its own. The starting points being different, it is clear that the results must more or less differ from those transmitted to us by ancient civilised peoples. This conflict of ideas must necessarily wound some prejudices which time will heal. Old traditions and the results of modern researches generally agree in this, that as regards the origin and development of humanity, the compound grew out from the simple. We may also add, putting aside some few other theories, that from the imperfect arose the perfect, and from a rude beginning a more civilised condition. The life of man, like that of the plant, has a beginning and an end. The beginning of life is under all circumstances simple, both in corporeal structure and in function. Little and weak, naked and helpless, man enters this world not even possessing as much power of resistance as a new-hatched bird.

"Ancient traditions, legends, and historical records agree as regards the origin of tribes and political associations. The derivation of Jewish tribes from nomadic patriarchs, the traditional origin of the Roman empire traced back to the twins suckled by a she-wolf, and many other records of the beginning of peoples and states, are all pervaded by the leading idea of a mighty expansion and higher development from a simple, feeble germ. Just as individuals grow up or perish, so may associations of individuals, under the influence of common conditions, rise or decay. Hence the old historians give to peoples, the origin of which is unknown to them, fictitious progenitors or eponymes.

"Thus, according to the Mosaic genealogy, MADAI is the father of the Medes, ASKENAS the father of the Germans, JAVAN the father of the Ionians, etc. Thus Tacitus tells us that the ancient Germans in their songs attributed their origin to MANN and his three sons. Three chief tribes of the Germans, the INGAEVONES, HERMIONES (or Hermionones), and ISTÄVONES (or Iscävones), are said to have been named after Mann's sons; INGUIO, ISTIO (or Iscio), HERMINO (or Irmino). Iscio resembles the ASKENAS of the Hebrews, and the ASK of the Scandinavians, a proof of the antiquity of the genealogy, extending from MOSES to the EDDA of the Iclander. We are thus entitled to attribute to the whole human species a development proceeding from the simple to the compound, from a lower to a higher stage. Old traditions and modern researches are in this respect in accord.

"The traditions of old civilised peoples, as well as the narrations concerning existing half savage tribes, are nearly similar. The statements of the Esquimaux and other uncultured peoples differ but little from some of the most ancient records. In most cases the whole human species is derived from a single pair, either created by a divine power, or emanated from it, or grown out from the earth. Commonly woman is represented as having been created last; among the Hebrews from the rib of man, among the Greenlanders from the thumb of the man. Most, though not all records, point to the unity of the human species. Growing development of culture and of mental

progress is frequently indicated, and also a primary perfect state followed by decay. On the whole, the theory of the descent of the human species from a simpler form, and a subsequent development of vital forms and intellectual development seem predominant.

"Modern science, with its incisive researches into the prevalent belief of the peoples, requires, as regards origin and culture, an assumption similar to that generally pervading the traditions—namely, the development of the higher and compound from a more simple root.

"As regards the nature of this *simple root of the human species*, there subsists a wide divergence between old and modern theories. The views concerning the *forces*, under whose influences the development of that root, and the trunk and branches proceeded, differ still more. A meditative dreamy mind sees in everything the power and goodness of Providence; but the cool searching intellect keeps more to the connection of the naked facts; it follows the effects of known causes; it infers from given results recondite but calculable causes, and displays, when it has found what was sought for, faith from the soil which it has appropriated for thousands of years.

"Here we arrive at the old yawning gulf between *believing* and *knowing*, the apple of discord among all highly civilised peoples, culminating in the determination of the question regarding the relation of man to the external world and the first origin of the human species. The greatest difference obtaining between old traditions and the results of modern research, relates to the solution of the question: whether man, as he is, has been *created* by a higher power, outside of the range of still acting natural forces; or whether he was *developed* by a series of normal and calculable natural processes.

"Most traditions of civilised peoples, as well as the legends of half savage peoples, are in favour of the creation of man. The feeling of dignity, the sense of the beautiful, and the consciousness of being separated from the brute, render the theory of creation more acceptable to the vanity of mankind.

"Notwithstanding the unequal struggle with the emotions, the sense of the beautiful and the feeling of dignity, calm examining reason leads us gradually but surely to the development theory. That which has been advanced by *Lamarck* and *Oken* as a mere hypothesis, acquires from hour to hour greater reality, supported as it is by Darwin's argumentation.

"Although the final decision is not yet given, it would not appear to be so far off. No one doubts, at any rate, which theory will ultimately prevail.

"The weight of scientific reason, the observations of similar processes in the present world, and the connection of individual facts, must eventually solve the problem.

"Modern science has still many unsolved questions for explanation. The means and ways are patent, but the means are frequently not within reach, and the roads are long. The question concerning the simple root of the human species first and urgently awaits solution. We are even as yet uncertain whether to derive the whole of humanity

from the self-same human root, or from several roots beneath the human form. The views are divided, the arguments oscillatory; yet the means and ways which may lead to a solution lie before us, and it is not so difficult to determine the period in which the question will be solved.

"Prichard, in the preface to his excellent work on the natural history of man, commences with the following quotation from St. Augustin:—'Men admire the heights of the mountain, the mighty waves of the sea, the high rush of the waters, the extent of the ocean, and the tracks of the stars, and neglect admiring themselves.'"

"At the time of Linnæus the science of man was still so far behind, that this author placed in the same genus 'man' by the side of the various races of mankind, idiotic children grown up in forests, and anthropoid apes.

"Herder, in his "Ideas on the philosophy of humanity," sighs for a modern Galen, who would successively compare man with the animals standing next to him, from the first visible beginning through all animal and mental manifestations up to the full development of the brain.

"We are at present somewhat further advanced in the knowledge of the position of man in the external world, and the relations of body and mind. Still we find ourselves entangled in conflicts and doubts, opposed as we are to inherited faith, and in apparent contradiction to the sense of the good and the beautiful. It is, however, vain trying to stifle this inquiry.

"The advantage of the decision will consist in the proper appreciation of the position which the whole of humanity and the individual man occupy in relation to the present and future living world. The decision of this question will also throw more light on the means by which humanity, as a whole, and the people and the state, as well as the individual, may become physically and mentally more perfect. *Knowledge is also here the basis of power.*"

THE DESCRIPTIVE ANTHROPOLOGY OF PERSIA.*

It is difficult, says the author, to determine the population of Persia, as there exist no bills of mortality or birth, nor was there ever a census taken for deducing the number of souls from the number of families and the houses they inhabit which might be ascertained; it would give rise

* *Persien. Das Land und seine Einwohner: Ethnographische Schilderungen.* Von Dr. Jakob Eduard Polak, ehemaligem Leibarzt der Schah v. Persien, und Lehrer an der Medicinischen Schule zu Teheran. *Persia, the Country and its Inhabitants: Ethnographic Sketches.* By Dr. J. Polak, late Physician to the Shah of Persia, and Professor at the Medical School of Teheran.

to many errors, inasmuch as a family, including servants—slaves that are either purchased or adopted—frequently attains a number of eighty to one hundred souls. On inquiry of several Persians what might be the population of Teheran, an answer is given which varies between 60,000 to 500,000. Still it might be possible to ascertain in the larger cities the approximate number of their inhabitants, as the number of the dead are written down by the *murdashurs* (dead inspectors and washers) for the information of the *kalæmter* (chief of the police). This chief is likewise, from the excise dues and the consumption of victuals, pretty well informed as to the fluctuating population. I could, notwithstanding my endeavours, learn nothing from this man; as regards the population, he answered vaguely, “Shæ'r bessîâr âbâd est” (the city is very populous). Religious prejudice, the fear of the evil eye, appear, as in King David's time, to be the cause of this reticence; hence the numbering of the people, ordered by the Shah to take place in 1859, was violently resisted. This prejudice extends even to the age of a person. On asking a Persian his age, he replies, “already past thirty or forty,” or “*'piremerd em*” (I am an old man). . . .

Taking the area of the present empire Iran, exclusive of disputed adjoining countries, to be about 22,000 square miles (geographical), and assuming 400 to 450 souls to the geographical square mile, we obtain a population of about nine to ten millions. The sight of the vast districts of desert land might induce the traveller to estimate the population at much less; but when it is considered that the northern and western provinces can place in the field 150,000 good soldiers the population must not be estimated too low.

The aboriginal inhabitants (Persians and Medes*) are rather of a dark colour, never so white as that of the Europeans; the iris is light brown (rarely black); the hair straight (never crisp) and of dark chestnut colour; the beard is thick and well developed; the cranium of a fine oval; the forehead but moderately high and flattened near the temples; the eyes are large, the cornea prominent, and the upper eyelid long so as to cover a considerable portion of the cornea; the eyebrows much arched meet at the root of the nose; the cheeks but little fleshy and without carnation; lips thin; chin narrow; neck never long; the larynx but little prominent; thorax broad and well developed; the hips and the pelvis of females wide; bones thin;

* The name Persians (Farsi) has been well preserved, but that of Medes is at present entirely unknown in the country, as they have been expelled by the irruption of Turkish tribes. By Farsi are generally understood the inhabitants of the southern provinces, for the Persians call themselves Irans and their country Iran.

extremities well formed ; slender about the joints ; hands and feet of remarkable beauty ; the body hairy. The Persians are rarely very obese ; on the other hand they rarely are very lean. I have during my whole stay seen but three fat Persians, who were still not too corpulent to be good horsemen. In stature they are of middle-size : very tall men are as rare as undersized individuals. The features are serious, but never so sharply marked as in the European, for the Persian is not easily excited by mental emotions. He early habituates himself to control the expression of his features ; hence the gesticulations of the Europeans astonish him. On the whole the Persian presents in his physical conformation a fine Caucasian type by which he is distinguished from other nationalities inhabiting his country, such as Tartars, Armenians, and Jews: Neither is there anything in his conduct which characterises the Southern and the Semitics.

Among the higher classes, and also among the officials and scholars, the so-called *mirza*, *mustāfi* (secretaries), *muharrer* (penman), *munshi* (correctors), as well as the numerous "luxury servants," we frequently meet with characters whose prototype is excellently portrayed in Morier's novel, *Hadji Baba*. The Persian has invented a peculiar name for them ; he calls them *fuzul* and their doings *fuzuli*. The *fuzul* is an individual who can adapt himself to every condition in life, but has constantly an eye to his own interest (*mædâchel*), and understands how to acquire another man's property, or, according to the Persian expression, "to eat it." He is pert and intrusive, and knows all the city news. Crouching like a worm before his superior, he is all presumption in the presence of a subordinate, whom he makes feel his authority. He lies systematically, and only speaks the truth when it brings him any profit. He tries to oppress every one who had been of use to him, as he despises gratitude, and cannot bear the idea of being under an obligation to any one. He is fit for everything, be it a minister of state or a stable groom. He affirms everything he says with an oath ; when convicted of a lie, he readily admits it, saying "Gau churdem" (I have eaten dirt). *Fuzuls* of the first water are specially met with in Ispahan ; hence Morier very properly has his hero educated there. The last Grand Vizier, Mirza Aga Chan, was a model *fuzul*, so that even the Persians considered him as a phenomenon, and called him *fuzul ibne fuzul* (*fuzul* the son of the *fuzul*). He entered the service of the state under Mehmed Shah. The minister, Haji Agassi, against whom he carried on some intrigues, said of him, "When the Diw of Demawend * looks down upon the

* The mountain Demawend dominates the plain of Rages and Teheran. The Diws (evil spirits) were, according to tradition, banished to the Demawend after the fall of the usurper Zahak.

plain of Teheran and sees the Aga Chan, he modestly retires, for he acknowledges having found his master." The European traveller comes in frequent contact with people of this stamp, and feels inclined to extend the caricature of Morier, which paints the character of a class, to the whole people.

Generally speaking, the Persian is covetous, fond of money, and is not over scrupulous as to the mode of obtaining it; but he lightly spends it. He is firmly attached to his family and his tribe, whose fortune or mishaps he shares. Treachery in a family is a thing unknown, and universally despised.

The Persian language, though highly developed, has no words for virtue, gratitude, repentance, honour, conscience. Virtue is usually translated *taekwā*, but this word signifies piety; the word *hunner* does not signify *honour*, but the capacity for a trade. . . . There are no words for conscience and scruples of conscience; the want of such words prove that these abstract notions have no existence among the Persians. The Persian is not particular about truth. Ever since the poet Sadi sang "A lie for a good object is to be preferred to truth if it excites quarrels," every untruth is considered as a necessary lie. The Persian certainly does not insist on being believed. It is a sort of convention; false coin is received and again expended, whilst no one considers himself as being deceived.*

The Persian is temperate in his meals, however high may be his position. He is satisfied at times with a meal of bread, cheese, and some vegetables. He is fond of quiet and comfort, but indefatigable and industrious when the occasion requires it. He well supports heat and cold, hunger and thirst. He bears with equanimity fortune and mishaps. If from a mere penman he rises to become a minister, the only surprise he will feel is that he has not obtained that post before, and that he did not know his own talents until they were detected by others. Again, if degraded and dispossessed of his property, he quietly retires to his harem, exclaiming, like Job, "*Kesmet est hemme mālē shāh, umre pādshah, dærāz bāshed*" (It is so destined, everything belongs to the king, long live the king).

The Persian has great power in controlling his passions; his features never betray what passes in his mind; they are a *tabula rasa*. He nurses his wrath until the favourable moment for revenge arrives.

In this respect he follows the maxim of Sadi, who relates: "A dervish who was insulted by a grandee held his tongue, but put a

* When, not long since, an English diplomatist complained to the Grand Vizier that his words could not be relied upon, he replied, "You may take it as a rule that everything I say is a lie, but what I write may be true."

stone into his pocket. Some time after the grandee was by command of the king cast into a ditch ; straightway came the dervish and cast the stone at his head." Sadi adds the following remark : " Some are of opinion that he might have forgiven him, but every one is at liberty to do as he likes." He also acts on the principle *nil admirari*, or, at any rate, never shows his admiration. He is witty, but illogical in his mode of thought. He always speaks of piety and justice, of his abhorrence of oppression, but whenever he has the opportunity he is the greatest tyrant, and appropriates another man's property without the least scruple. Whenever the king is pressed by European powers he makes his ministers suffer ; these again retaliate on the governors ; the latter on their subordinates, who again oppress the Christians, Jews, and the Gebers.

The Persian, not being sure of the morrow, cares only for the present. The king, like the Chan, builds houses to last only for a few years. The peasant only plants as much and only such trees, the fruit of which he may be able to enjoy within the shortest time.

The Persian is fond of giving entertainments and of theatrical representations, farces, dancing, and fireworks. Being himself a born actor he is a good judge of acting.

He is not inventive by nature, but skilful in imitation. He has a quick perception, learns readily, but then he suddenly stops short, and is satisfied to apply to practical uses what he has acquired. He is attached to his native place, but cares little for his fatherland. By no means fanatical, he desires to be considered as very religious. Two Persians, who when at home never think of saying their prayers, are no sooner thrown together than they immediately begin to show their zeal in religious observances, although they know full well that they deceive each other. The Persian never roundly refuses a request ; he prefers promising without the least intention of keeping his promise.

The Persian is particularly fond of mystery. Every secret society excites his interest ; every new religious sect soon finds many adherents. Thus freemasonry began to spread ; for in Persian it is called *faramush châne* (house of oblivion). The French word *franc-maçon* accidentally resembles the Persian *faramush* (oblivion), hence arose the idea that on entering the lodge a person forgets his former life. After the return of many Persians from England at the time of Mehmed Chan, and lately at the return of the Ambassador Ferruch Chan, freemasonry spread much in Persia, even among the attendants of the Shah. Many Mulas and Seïde were received in the society, secret conventicles were held, and curious scenes are said to have occurred, until the king felt bound to interfere and to threaten the

leaders, some of whom were exiled. Every secret society in Persia is suspected of threatening the existence of government.

The mode of salutation is the same as among other Mahommedans. Unbelievers are, however, not considered worthy of the *salam*, it being a symbolical expression of Islamism; the Mussulman derives *salam* (peace) and *islam* from the same root. Strangers, therefore, are, instead of this salutation, overwhelmed with compliments and inquiries about their health, &c. Insults and curses are rarely directly applied to the individual, but to his family, father, mother, or the grave of his ancestors. The most common insult is *peder-suchte* (thy father was burnt, *i.e.*, he was a heathen), and *peder-sek* (thy father is a dog). The insults applied to women are too obscene for translation. The Persian generally swears by the head of Ali, Mohammed, the Shah, &c.; he repeats Wallah, Billah, Tillah. Most, however, of these solemn asseverations come to the account of his partner in conversation; hence the oath *besære shumâ* (by your head) is mostly heard. The Persian makes no particular motion with his head as an affirmation, but no he expresses by moving the head upwards and backwards, at the same time contracting his lips. His wrath he generally expresses by the formula *la illah il allah*; his admiration and applause by *bârik-allah, â ferin, hæzâr, â ferin, mash-allah* (bravo, thousand bravos).

The Turco-Tatar Race.—The skull of this race is, compared with that of the Iranian, less oval, the eyebrows less arched, not meeting at the nose; the eyelids are thicker; the iris brown; the nose short and thick, both at the root and the wings; the cheekbones and the chin are broader; the lips more fleshy; the extremities coarser; and the skeleton more massive; the stature is generally higher than that of the Persian.

The Turco-Tatars approach in character the Osmanlis (inhabitants of Turkey). They are not so crafty, but braver and more resolute; hence all soldiers are taken from this race. They despise the Persians as cowards, and are proud of their Turkish descent. The contrast existing between these two races induces the Government to send the Turkish regiments into Persian districts, especially into Ispahan and Shiraz. The Turk never learns to speak the Persian language perfectly; instead of *u* he always pronounces the French *u*.

The Kurds are a fine stout race of men. They differ as regards the colour of the eye, skin, and hair so little from the northern, especially Germanic races, that were it not for the customary dyeing of the hair and their oriental dress they might be taken for Germans. They speak a peculiar dialect, which belongs to the Iranian family of languages. They are subject to a governor (Wali), who is appointed

by the Shah. The dignity is nevertheless hereditary in the family, which boast of their descent from the Sassanide princes. The residence of the Wali is in the little town called Senne. The Kurds are brave, but noted robbers; still they are hospitable, candid, and trustworthy, hence the present Shah confides the protection of his person and of his family to a Kurdish general—Adshutan-Bashi Azis Chan.

The Armenians are distinguished from the Persians by a fairer skin, full cheeks, finely coloured in youth, a massive skeleton, and a predisposition to obesity, which is seldom seen in the Persian. The women especially become very corpulent. The beard is weaker than in the Persian; the eyebrows less arched and bushy; the hair on the head brown, and in early youth of a lighter colour.

The number of Armenians and their former wealth is now much reduced. Tatus Chan, the Armenian Bishop in Ispahan, assured me that the number of souls of his bishopric, extending from Java and India to Kaffan Kuh in Persia (between Irak and Azerberdshan), amounted to only 20,000; to which must be added a small number of Roman Catholic Armenians and some hundred families in Tabris, which belong to the Bishopric Utsh Mazin. Most live in Ispahan; at present only 400 families, instead of the 12,000 at the time of Chardin; some live in Tabris and Teheran, and a few families in Shiraz and Bender-Busher.

The Jews.—Despite my endeavours to learn something about the history of their immigration, I was unsuccessful, since they possess neither historical nor traditional documents. Once only, a Jew brought me an historical work, which turned out to be only a manuscript translation of Josephus Flavius. They were once, at the time of the Sassanides, very numerous and powerful in Southern Persia. They occupied large districts and populous towns; but were, by oppression and persecution, so much reduced that, as the Jewish scholar Mula of Hamadan assured me, the number of Jewish families in Persia now amounts only to 2,000 families. They form three large communities in Shiraz, Ispahan, and Katshan; smaller ones in Teheran, Demawend, Balafrush, and Kazeran; some live scattered in Kurdish villages. The large Jewish congregation in the great place of pilgrimage, Meshhed, separated in consequence of a disturbance caused by the priests, which threatened them with extermination. Many ostensibly embraced Islamism, but form even now a secret Jewish congregation; others fled to Herat. The supposed conversions of the adventurous missionary, Jussuf Wulf—so is the Rev. Joseph Wolf called in Persia—are fabulous. The poor missionary was willing to be deceived. From insufficient knowledge of the

Persian language he took absence of opposition for consent, *ergo*, for conversion. Mula Meihdi, of whose conversion so touching an account is given in his book, wrote to his co-religionists in Teheran that there was not a word of truth in it.

The Jews speak a *patois* intermixed with old Persian. They are, moreover, the only race in Persia using hissing sounds, which the Persian is quite unable to produce. They gesticulate much with the hands and the facial muscles, which the Persians avoid, as they wish not to betray their emotions.

There are among the Jews here two types: the pure Arabic, with fine aquiline noses, black and piercing eyes, and handsome extremities; and a race, which in remote times crossed with Chamites, with thick noses and crisp hair, frequently resembling negro hair. Climate and social conditions do not seem to have influenced them much, so that they can scarcely be distinguished from Jews in other countries.

Their laws are the same as among other Sephardim-Jews, only that polygamy is permitted, of which, on account of the oppressed condition in which they live, little advantage is taken. They celebrate the same festivals; the Purim festival is also accompanied with the knocking at the mention of the name of Haman. The books of the Law are copied and preserved with the same formalities as elsewhere. There are enthusiasts amongst them who fast from three to seven days.

They support themselves by silk-spinning, glass-grinding, jewellery work; they manufacture alcohol, brandy, ammonia, muriatic and sulphuric acid; they understand chemistry, and are employed in the Mint. Many are renowned physicians; one of the physicians in ordinary to the late Shah was a Jew named Hakim-Dāza. They enjoy also a reputation as good singers and musicians; hence they are frequently invited to entertainments.

The only national monument the Jews possess in Persia is the grave of Esther in Hamadan, ancient Ecbatana, whither they perform pilgrimages from time immemorial. In the centre of the Jewish quarter there is a small building with a cupola, upon the top of which a stork has built its nest. The entrance is walled up, excepting a small aperture at the bottom, through which a man may pass crouching. This leads to a low ante-chamber containing many inscriptions of the names of pilgrims, and also an inscription of the year of the restoration of the chapel. This ante-chamber leads to a small square room, with a few narrow windows admitting but little light, which contains two high oak shrines, ostensibly the monuments of the graves of Esther and Mordecai; round about them are, in Hebrew, written the verses of the last chapter of Esther, and also the names

of three physicians, at whose expense the grave has been restored. There are many reasons which speak for the genuineness of the Esther tradition and this grave.

The Gebers (Guebers), or Zerdutshi, i.e., Zoroastrines as they call themselves, are now found only in small numbers in the towns Yezd and Kirman. Looked upon as idolators, they would long since have been exterminated if they were not in possession of a charter given to them by Caliph Ali (preserved in the city of Yezd), and were under the protection of the Indian Parsees. The latter send them annually considerable sums to satisfy the extortions of the governors; for they are very anxious that a remnant should be preserved in the mother country to keep up the sacred fire; hence they endeavour to prevent total emigration. The Gebers enjoy a good reputation for industry and honesty; they are the intermediators of the Indian trade, and have their own caravanserais in Teheran, Ispahan, and Shiraz. Their number amounts to about 8,000 to 9,000.

The Turkomans, or Mongols of pure blood, natives of Turkistan, hostages from the tribe of the Goklans, but few are to be seen in Teheran. They are distinguished by a yellowish skin, broad cheek-bones, broad forehead, oblique small eyes, broad nasal root, so that the eyes appear to be with it at the same level, and long, thin moustaches, and the absence of whiskers. Being hostages, they receive from the government a small pension. They are also farriers, and manufacture beautiful horse-cloths. Their life is singularly associated with that of the horse, for which they manifest a decided predilection. I have seen Goklan children, eight to ten years of age, riding high Turkoman steeds; swiftly galloping along, they grasp the horses around the neck, and caress them. Many inhabitants of Khorassan present all the marks of being cross-breeds of the Turkoman race. According to official accounts, there were, in 1855, in Persia 22,475 Turkoman families, or, more correctly, tents of the tribes Jamut, Goklan, and Tekkeh.

The Afghans, of the purest Caucasian race, are recognised by their high stature, vigorous body, intellectual physiognomy, large eyes, and firm step. Their number is but small, and, as refugees, they receive a stipend from the Shah; hence the people give them the nick-name *mushe-chazineh*, i.e., the mice of the treasury.

The Belooches are only here and there found as slaves, and approach the Hindoo type. Crosses of Iranians and Belooches are frequently met with, especially at Sistan.

Gipsies (Kauli Karatshi) are met with as wandering tribes in many parts of the empire. They perfectly resemble their European cognates in physiognomy, habits, and mode of life. They are dancers, musi-

cians, and fortune-tellers,* and also farriers, tinkers, and form separate tribes (ils) under Nomadic chiefs. They are, besides, considered good runners, hence all shatirs (runners) of the king belong to this race.

The colony of Europeans consists, exclusive of embassies, consulates, some merchants (French, Greek, German, Swiss, and Russians), and some foreign officers and physicians in the service of the shah, on the whole of scarcely more than one hundred individuals. They live in Tabris and Teheran; three families are in Resht, and one family lives in Shiraz. The European finds no home here; he is in a state of isolation, and is shunned by the natives. There is no case known to me that a European adopts Persia as his second fatherland, as is the case in Egypt and Turkey. Cut off, by the difficulty of communication, from the civilised world of Europe, and separated from the female population by law and custom, so that he rarely sees an unveiled face, the character of the European, who is obliged to remain here, undergoes a change; he loses his energy, becomes unsociable and peevish, even with his fellow European sufferers.

BROCA ON ANTHROPOLOGY.

[*Concluded from vol. v, page 204.*]

In order to give an idea of the complexity of certain questions of general anthropology, and to show how they may be solved by the analytical method, we shall, as an example, select one of the most controverted subjects, and search for the cause of the numerous varieties observed in the Indo-European races.

Linguistics have established the fact, that nearly all the peoples of Europe, America, Persia, Cabul, Beluchistan, Hindustan, speak dialects of the same primitive language, the common mould of the Zend and the Sanscrit. It has hence been concluded that a primitive people, issuing probably from a region to the north of Persia, had sent colonies and extended its branches on the one side to the borders of the Ganges, and on the other to the shores of the Atlantic—without speaking of recent migrations, by which the European races and

* Dr. Cloquet related to me:—"During my stay in the Royal Camp at Sultanieh, a gipsy woman came up to me to tell me my fortune from a large printed sheet; I immediately perceived that it was a number of the *Journal des Debats*, which I afterwards heard was presented to her by General Terrier for some service she had rendered him."

languages have spread in the New World, Australia, and many other regions. Here we have a fact well established.

At the time when the Indo-European peoples first set foot in Europe, they did not find that region altogether deserted; it had been occupied before their arrival by an autochthonous population. There are still found, at the two extreme ends of Europe, the Basques and the Fins, whose languages are incontestably derived from these autochthones. But elsewhere there remains neither in the language nor in the traditions any trace, any remembrance, of a people prior to the arrival of the Indo-Europeans, so that the existence of these primitive peoples might be doubted if their crania had not been discovered in the turf-pits, in the graves of the stone period, in the ossiferous caves, and in the diluvium. This decisive testimony supplies the silence of history. Here, then, is a second fact now generally accepted.

This being granted, the Indo-European peoples, considered by the incontestable filiation of their languages as issued from one and the same race, present considerable differences. Some are dolichocephalic, others brachycephalic. They are tall or short, have very fair or very dark complexions, with all intermediate shades, from the Scandinavian, with his blue eyes, his pale hair, his white skin, to the Hindoo, with black eyes and black hair and a bronzed skin. Finally, these peoples differ in manners, taste, aptitude, industry, art, literature, science,—in their religious tendencies, their politics, at least as much as in their physical characteristics.

In order to explain these differences of stature, of cephalic type, intelligence, etc., several hypotheses may be advanced, based upon the various conditions to which the different branches issued from a common stock have been subjected in the respective regions to which they have been transplanted. Each of these migratory peoples has several times changed its abode, climate, social condition, alimentation, and mode of life. Some have remained for a long time or are still in a semi-barbarous state. Others have been civilised from the highest antiquity. All finally have, from the first, found themselves in the presence of autochthones, whom they have vanquished, displaced, denationalised, destroying their language and history, casting their very nature into oblivion, but whom they certainly could not have exterminated all at once.

Temperature, hygrometric conditions, altitude, alimentation, mode of life, industry, civilisation, and intermixture of races—all these influences taken separately or by the combination of some of these, have given rise to numerous hypotheses, in order to explain the actual diversity of the Indo-European peoples.

The fair complexioned Scandinavians, living in a cold country, and the bronzed Hindoos living in the torrid zone, has at first led to the supposition that the differences of coloration depended on temperature. But the Rohillas of Hindustan have a white skin, blue eyes, fair hair; whilst men with dark eyes and dark hair form the majority in certain districts of Ireland, Wales, and the Scottish highlands. The Gipsies, who came from India and spread over Europe since the 12th century, have in the cold countries, even to the Cheviot Hills, preserved the tawny complexion and the black eyes and hair of the Hindoos. The German colony in Paraguay, founded in the fifteenth century by the soldiers of Charles the Fifth, having remained pure by non-intermixture, presents a parallel instance of an Indo-European people remaining as fair under the tropic of Capricorn as on the banks of the Elbe.* Consequently, if there exist brown or fair Indo-Europeans, it does not depend on temperature. In reviewing the other climatic conditions, we find in the same way, by numerous examples, that they are incapable of producing the result in question.

We then arrive at influences of another order, which have not been considered as influencing the coloration, but which appeared to explain the variations in stature and muscular force. These are alimentation, mode of life, and subsidiarily industry, which leads to comfort. Two hypotheses are here face to face. It has been admitted that the social condition—that is to say, civilisation—by affording regular subsistence, abundant alimentation, gradually tends to increase both the height and physical force. Or, on the contrary, it has been admitted that civilisation, being unnatural, tends to develop the mind at the expense of the body, and in course of time renders man weaker and shorter. Both these hypotheses rest upon a certain number of facts, or rather coincidences. Thus the Græco-Latin people, civilised before the Germans, Scandinavians, and Slavonians, are shorter than the latter; but the Bas-Bretons are shorter than the Belgians, the Normans, and the Provençals, who have been civilised long before them. Many other facts might be cited in support of either of these hypotheses, which mutually destroy each other. It does not result from this that the conditions of existence have no influence upon stature; but thus much results, that the variation in stature of Indo-European peoples cannot be explained by these conditions.

It has finally been supposed that the variations of the cephalic

* A similar Spanish family, remaining perfectly fair and purely Gothic, from non-intermarriage with darker types, and in position and rank holding for centuries official supremacy, is to be found in Yucatan at the present day.—ED. ANTH. REV.

type constituting brachycephaly and dolichocephaly might depend on intellectual culture ; that the brain might, like the rest of the organs, be developed by exercise ; that the most active organs of the brain might become more developed than the rest ; and that consequently the degree and the nature of civilisation might modify both the volume and the form of the cranium. But, on the one hand, in taking a general view on the subject, we find that there subsists no relation between the brachycephalic and the dolichocephalic types as regards the intellectual value of races. The Teutonic races which occupy the first rank in the human series, are dolichocephalic, like the Ethiopian and Australian races, which stand last. Brachycephaly belongs to the Slavonians, the Turks, the Mantchoos, the Papuas, and numbers of other peoples occupying all degrees of the scale, without including the present French and South Germany, which are on the average nearly brachycephalic. On the other hand, from a special point of view of the Indo-Europeans, we find that the Scandinavians are more dolichocephalous than the Hindoos ; these, again, are more so than the French ; and that no relation can be established between the cephalic type of these different peoples and their civilisation either in the past or the present.

Having thus passed in review all these influences, and recognised that none of them explains the variations produced in the Indo-European nations, we arrive, by way of elimination, at another hypothesis which, without pretending to be rigorously demonstrated, possesses at least the advantage that it better explains all the facts and meets all objections. The existence of a primitive, or at all events an anterior population, at the arrival of the Indo-Europeans, has been established by human palæontology wherever persevering researches have been made. Among these aboriginal populations some were brachycephalic, others dolichocephalic ; some were tall, others were short. The intermixture of the conquerors with the vanquished naturally explains all the variations in stature and cephalic type. Palæontology teaches us nothing as regards the colour of the eyes and hair of the aboriginals ; but these have not altogether disappeared, and where they still exist, as in Hindustan and the region of the Pyrenees, they present, in reference to these characters, the greatest analogy to the Indo-Europeans adjoining them. All this is explained by the intermixture of races. The Indo-European idioms imported by the conquerors have prevailed over the indigenous languages, and have alone survived ; but the indigenous people have not, for all that, disappeared. Although losing their language, their name, their nationality, they have not ceased to exist. The complete extermination of one race by another race is a phenomenon nearly impossible,

considering the condition in which the immigrant peoples found themselves. The intermixture of blood was an inevitable consequence of these immigrations, and, in proportion to the numerical preponderance of either race, the cross-breed resulting from this intermixture approached more or less to the indigenous or the foreign type. Nothing more is required in order to understand the diversity of the physical characters of the peoples now speaking the Indo-European idioms; and this theory of intermixture explaining all the facts, and being open to no objection, presents itself invested with every scientific probability.

This rather long digression seemed to us necessary, in order to show, by a very complicated example, how the analytical method may be applied to the study of anthropological questions.

The preceding example has, moreover, shown that great difficulties arise from the great diversity of intrinsic or extrinsic conditions amidst which the races under examination find themselves. All the characters they present are not of equal importance; some are more, others less, significative. If all tended in the same direction; if all the peoples of the same colour possessed the same stature, hair, cranial conformation—the same degree of intelligence, the same inclinations, the same language; if all of these were under the same, or at least a very similar climate; if all had at the same, or nearly the same, epochs arrived at the same social level—the task of anthropology would be an easy one; but it is not so. The anatomical, physiological, psychological, climateric, and other facts combine and cross each other in a thousand ways. One character establishes an approximation, whilst other characters establish profound differences; and there result from this, continual contradictions, which, however, are and must be only apparent, and which will disappear when the whole truth becomes known, but which hitherto have given rise to difficulties and dissidence.

The naturalists also have had to contend with difficulties of the same nature, and if, after many failures, they have succeeded in giving to their science a positive character, it is because they have recognised the necessity of adopting a principle of co-ordination secured from the inroad of fancy. This principle is that of the subordination of character. This is not the place to expound it, to demonstrate its value, and to teach its applications. No one, moreover, ignores that it is one of the most essential bases of the natural method.

The aim of the anthropologist should be to apply as much as possible to his science the principles of the natural method, a proposition which requires no demonstration. But among the characters diversifying the human group there are some which properly belong to it,

or are only found in a rudimentary state in other zoological groups. The particular considerations, according to which the naturalist establishes the subordination of characters, are thus insufficient for the anthropologist. In the presence of anatomical or morphological facts, whose relative value notably differs in the various degrees of the animal scale, there are other characters of quite a different order claiming a place which must be determined. When we consider that man is distinguished from other animals more by his intelligence than by his physical form, we can easily understand why some anthropologists have, in the classification of human races, assigned the first rank to psychical characters, by which humanity has acquired domination on the globe, and to assign the second place to physical characters, by which man so nearly approaches the anthropomorphous apes.

But the question should not be put in this way. Here it is not the question to distinguish the human genus from other groups, but to subdivide it into secondary groups as clearly defined and as natural as possible. It is necessary to base this division upon what is most fixed in the organisation of man, upon that which most resists the influences capable of modifying the individual or the race. Now, it is unquestionable that the physical characters are more permanent than the others, and that, consequently, they deserve the preference.

No doubt, languages, manners, industry, religion, all kinds of aptitudes, establish profound differences between the various races of mankind. But these characters, the study of which is as interesting as it is important, become frequently modified by circumstances, and may vary considerably in peoples of the same race. We cannot therefore assign to them any supremacy. There is, nevertheless, one which deserves special attention, and which plays a principal part in a great number of anthropological questions; so much so, that some others have felt justified in making it the almost exclusive basis for the classification of races. We speak of language. Linguistics render the most marked services to anthropology. Two peoples belonging to different races are separated from each other by several thousands of miles; they are so much strangers to each other that, neither in their respective histories, nor those of other peoples, is any mention found of their original parentage, and yet these peoples who have never heard of each other speak very similar idioms. The words are not the same, but the roots are. The grammar is nearly the same, and it becomes certain that these two languages had the same origin; consequently, the peoples speaking that language should, despite their actual dissemblances, have had common ancestors. On the other hand, there are two groups of races, which, since the origin of history, have always moved side by side, who have more than once intermixed,

who have interchanged their civilisation and religion, and who, as regards physical characters, present no very marked differences; such are the Indo-European and the Syro-Arab, improperly called Semitic, races. Now, despite their vicinity, their similarity of type, and various intermixtures, despite the fundamental community of facts, despite more or less durable political fusion, these two groups of races speak languages so distinct that the most eminent linguists have despaired of reducing them to a common origin. (See Renan, *Histoire Générale et Système comparé des Langues Sémitiques*. Paris, 1858.)

These inverse examples show the importance furnished by linguistics. These characters present, besides, a remarkable permanence. The *spontaneous* modifications introduced in the course of generations, either in grammar or words, however great they may appear, are of but a secondary order, the primitive type of the language continuing to subsist. This has been the case in all cases scientifically known; and these spontaneous modifications of words and grammatical forms constitute a sort of evolution subject to certain laws.

The linguistic characters have hereby acquired such a degree of precision that it has become easy to establish in languages methodical divisions and subdivisions, to distinguish a certain number of trunks dividing in primary, secondary, etc., branches, and thus to institute a taxonomy as regular, as positive, and as complete as that based upon physical characters. We may state here at once that in many cases the groups based on linguistics coincide pretty nearly with the groups based upon the anatomo-physiological study of human races. But when these two orders of research lead to contradictory conclusions—as we have seen in the example of the variations of physical characters in peoples speaking the Indo-European tongues—it then becomes necessary to choose between the evidence of direct observation and that of linguistics, and to subordinate the characters drawn from language to those drawn from organisation, or *vice versa*. Naturalists readily give the preference to the latter; linguists place the former in the first rank. In order, then, to give to these difficulties a scientific solution, it becomes necessary to establish, on positive considerations, the relative value of the two orders of characters.

Every one admits that the distinctive characters of the races of man acquire value in proportion to their permanence. This is a general principle of natural history, and is also that of linguistics. The question, therefore, is whether the organisation of man is more or less permanent than his language. This question would not arise if the absolute and continuous immutability of the physical type were completely demonstrated. It is clear that languages become modified in

time; if immense researches were required to discover the affinity and the filiation of the Celtic, Hellenic, Latin, Germanic, Slavonian, Persian, and Hindoo languages, it is because fifty or sixty centuries have so greatly altered them. Neither the Italian nor the French peasant understands the Latin tongue, which their ancestors spoke twelve or thirteen centuries ago, and it is more than two centuries since the language of Sire de Joinville, the companion of St. Louis, has become unintelligible to most Frenchmen. These modifications may be slight, but they correspond with very short periods; and besides, however slight they may appear in the eyes of linguists, they are palpable and evident, and they become even considerable from a political point of view; for the primary condition of a political solidarity is unity of language.

Linguistic characters are therefore not absolutely permanent. The limits of the changes they may undergo are as yet not strictly determined. These are essential features, fundamental characters, which, in all known cases, have maintained themselves without alteration in all languages from the same stock; and nothing has hitherto confirmed the hypothesis of unitarian linguists, who, in order to conciliate the actual state of things with the idea of one primitive language, have supposed that the type of languages may, within a number of centuries, undergo a total transformation. But whilst the limits of a spontaneous alteration of languages are as yet undetermined, one point is sufficiently established, that these limits are of great extension.

The question of the permanence of physical types is not less controverted than that of linguistic types. The Darwinists assume that all animals, including man, are derived from a small number of simple beings, possibly from a primordial monad; the Monogenists, with much less boldness, are of opinion that all human races are derived, if not from a single couple, at least from a certain number of primitive men perfectly resembling each other. The Polygenists finally assert that human types are only liable to slight modifications; that the chief physical characters are permanent; and that, consequently, the actual diversity of races can only be attributed to the multiplicity of their origin.

Here, as in the preceding case, the divergence of opinions is in proportion to the duration of the intervening time. When we hold to the period of time of which we possess historical, archæological, or anatomical records, it is found the types of races are permanent, or rather that they have not appreciably changed in races who have not intermixed, and even in such as have more or less crossed. But when, on the other hand, we consider that the few thousand years to which our history extends in the life of humanity is an extremely

short period, we may admit, if not as demonstrable, at least as quite possible, that the modification of types, too slow and too slight to be perceptible after five or six thousand years, may, after lapse of two or three thousand centuries, have affected the different races issued from one primitive stock.

Finally, if we plunge further into the unknown past, and count by millions of years, we arrive, with the school of Darwin, at conceiving the possibility of a universal brotherhood, not merely with negroes and Australians, but with apes, fishes, molluscs, and zoophytes.

From these discussions concerning origin, emerges a perfectly positive fact—namely, that physical characters are but little variable, and though they become modified under a prolonged influence of media, the process is extremely slow. Upon the ancient monuments of Egypt, nearly four thousand years old, there are representations of Negroes, Jews, Greeks, Mongols, Hindoos, and of natives. All these types were as distinct then as they are now. Since then they have not changed perceptibly, whether in the Valley of the Nile, the adjacent districts, or in distant regions where the conquering Egyptians penetrated. The celebrated cranium of New Orleans, found in a deep bed beneath a series of cypress forests, successively submerged by the alluvia of the Mississippi, presents the actual type of the indigenous North race of ~~South~~ America. All the efforts made to reduce the antiquity of this cranium have failed to make it less than fifteen thousand years. The present type of the red-skins did thus exist at least one hundred and fifty centuries ago; it has not changed since then, and yet, during a period not half so long, the Indo-European languages have become so much modified as to be scarcely recognisable.

These facts, which might easily be multiplied, do not pretend to establish the *absolute* permanence of the physical types. There is a change which escapes us, because of its slowness, but which might become apparent if the observation could be extended to periods eight or ten times as long. What we here wish to establish is the relative degree of permanence in physical and linguistic characters, and there can be no doubt that languages—the work of man—are much less stable than organisation—the work of nature.

If, therefore, instead of considering the gradual mutations which supervene *spontaneously*, from century to century, in all languages not fixed by a strong literary organisation, we consider the most rapid changes effected under the influence of political and social circumstances, we see radical transformations, complete substitutions, resulting in the disappearance of a language, without those who spoke it ceasing to resemble each other in every other respect.

The Cornish, a Celtic dialect spoken up to the middle of the eigh-

teenth century, has gradually been supplanted by the English language. In the same way the French is superseding the *patois* of the south. May be that not a century will elapse before all the *patois* dialects have become dead languages. The Breton dialects, Celtic idioms of the ancient province of Brittany, are already banished from Lower Brittany, and will certainly, sooner or later, be displaced by the French language; and the Basque, finally, which most linguists consider the oldest of all known languages, will, no doubt, disappear in its turn: for this language has, for a century past, lost much of its territory. On the two slopes of the Pyrenees, French and Spanish are already spoken in all important towns; in many villages they begin to displace the Basque, and it requires no prophetic power to foresee that ere long they will penetrate into the hamlets.

These substitutions of languages proceed slowly in time of peace, without any intermixture of races, by the simple effect of political conditions and education. The new language first reaches the higher and then the middle classes. The peasant is in his turn obliged to learn it, and the old language becomes gradually extinct. These facts occur daily around us, in proportion as modern nationalities become consolidated; and thus it happened many a time, both in the past and the present, that numerous populations, nay, entire peoples, have ended by exchanging their languages without experiencing in their physical characters any serious modification. It is true that more frequently the substitutions of languages have been produced by political catastrophes, immigrations, or conquests. Conquering peoples have been known, in course of time, to impose their language on the vanquished; on the other hand, the latter have also maintained their languages, whilst the foreign conquerors forgot their own. In either case, both populations become, sooner or later, inevitably fused, and there arises a mixed population which takes more or less after either of these races. This intermixture of blood always takes place in unequal proportions. The physical type alters at first in proportion to the intensity of the intermixture; then the hybrid race tends, in the course of generations, to return to the type of the most numerous mother race. The physical characters which survive the intermixture, with more or less purity, are those which belonged to the numerically predominant race, whilst, on the contrary, the surviving language is frequently that of the less numerous race. There is thus no parallelism; there is even an apparent contradiction between the linguistic fact and that of anthropology proper.

It results from this somewhat lengthy exposition, rendered necessary by the pretensions of a certain school, that in anthropology the

characters of the first order must be taken from the study of the organisation.

In other words, when there is a contradiction between linguistic and physical facts, the preference must be given to the latter. Linguistics are, nevertheless, most precious auxiliaries of anthropology; but the furnished information cannot be looked upon as a decree. The results of philology are positive; they even possess a degree of precision, certainty, and simplicity rarely found in the study of physical characters; but these results once acquired require interpretation, which the anthropologist only is able to give with any certainty.

The principle of the subordination of characters must now be extended to various physical characters. They are not all of equal importance, nor have all of them the same degree of permanence; but this degree of comparative permanence is as yet not sufficiently determined to make it the object of a methodic subordination. It cannot be done without the assumed solution of a number of contested questions. We must thus confine ourselves to consider the characters with regard to their own importance. Now, whether taking a purely zoological or a physiological stand-point, we are authorised to rely upon the relative characters of the skeleton of the head as more important than all the rest; and it is for this reason that Isid. Geoffroy Saint-Hilaire bases exclusively upon the study of these characters the determination of the four grand types around which he groups all the human races, distinguishing after these the secondary characters, such as the colour of the skin, the nature and implantation of the hair, the shape of the nose, the direction of the eyes, etc. (*Isid. Geoffroy Saint-Hilaire, Sur la Classification Anthropologique et sur les types principaux du genre humain*, in the *Mémoires de la Société d'Anthropologie*, tom. i, p. 125-144. Paris, 1860. 8vo.)

There now remain characters of a different order, which no doubt are connected with organisation, with the cerebral constitution of races, but must not be confounded with organic characters. We speak of aptitudes intellectual, moral, and social. There exist races eminently perfectible, who enjoyed the advantage of outstripping all the rest, and engendering high civilisation. There are, again, some who have never taken the initiative in progress, but who have accepted or adopted it by imitation. Others, finally, have resisted all the efforts made to rescue them from a savage life, thus proving the unequal degree of *perfectibility* possessed by the various races of mankind. A character so important as this, the consequences of which were enormous in the past history of humanity, as they must

be in the future—is this character subordinate to those of the eyes, skin, or hair?

We have no hesitation in replying, yes. Perfectibility is one of the most interesting elements in the study of races, but it is impossible to constitute it an element of classification. Perfectibility is not a simple faculty, it is only a result, being a manifestation of a congeries of intellectual faculties. The absence of perfectibility does not indicate the absence of these faculties, but only their impotence in mastering the inclinations and instincts which maintain man in a savage state; and according to external circumstances, difficulties or facilities of existence, mildness or rigour of the climate, more or less, call forth efforts of intelligence; so will people of the *same race*, and consequently endowed with an equal degree of perfectibility, manifest the latter in a manner extremely unequal. An infinite number of centuries have elapsed before the first civilisation of humanity; and Egypt had already reached a high degree of splendour, whilst the whole of Europe was still plunged in the darkness of profound barbarism. Perfectibility, although inherent in the primordial organisation of numbers of races, may thus remain latent during an indefinite lapse of time before it manifests itself; and when a people presents itself before us in the most abject intellectual and social condition, we must ask ourselves whether this people is really refractory to progress, or whether it only requires for its elevation from a savage state a concurrence of favourable circumstances. The solution of this problem is not always possible. There are cases in which the past is of such a nature as to leave no illusion as regards the future. Never has a people with a black skin, woolly hair, and a prognathous face, spontaneously arrived at civilisation. The African negroes, which are far from occupying the last rank in the human series, have never been able to give to their societies the stability which is the essential condition of progress, and there has never been seen a government uniting into nations the savage tribes of Australians or Pelagian negroes (or Melanesians). But by the side of these examples, which unfortunately are too clear, there is a considerable number, the interpretation of which, doubtful now, may perhaps remain doubtful for many centuries to come. Perfectibility is, therefore, not one of those characters which necessarily result from the study of a race. It should occupy a large place in the study of the anthropologist; but it is too difficult to be determined—it is connected with elements too variable and too complex to make it intervene as a general term in the characteristics of races. And what we say of the ensemble of the qualities and faculties which preside at the organisation of societies and the birth of civilisations, applies more

strongly to special industrial, political, artistic, literary, scientific, religious, or other aptitudes, when determining the form of each civilisation.

In the preceding exposition, by descanting on the method and essential principles of general anthropology, we have at the same time glanced at or indicated a great number of questions which belong to its domain. We have no intention of exhausting our enumeration of the subjects of study, but we deem it our duty to touch upon some which, either by their scientific interest or their practical importance, deserve particular attention. We do so for the purpose of showing the concatenation of certain anthropological questions.

The investigation of origin, taking this word in its absolute sense, pertains not to science ; for beyond observed facts, beyond more remote facts discovered by way of induction, and still more remote ones which are only approached by hypothesis, there still remain, and ever will remain, primordial facts in the presence of which hypothesis remains dumb and powerless. Scientific research in such cases, according to the nature of the mind, yields its place to philosophical doubts or to faith. The Darwinian hypothesis, the boldest which can be cited, carries back the problem of origin to the apparition of the first monad ; but the fact of the first transition of inorganic into organised matter, which can neither be explained nor divined, is beyond the extreme limit of what can be known, for it is only a play of words to say that matter has the property of organising itself when it finds itself placed in favourable conditions.

The hypothesis of Darwin on the origin of species forms no essential part of anthropology, yet it is inseparable from the research concerning the origin of man, or rather the human type.

Anthropology proper embraces, in the history of the globe, only the human period ; and the first question that presents itself is that of the antiquity of the human species. The time is past when the age of humanity was computed by years. Man has left traces of his existence, marks of his industry, and remains of his body in geological strata, the antiquity of which is beyond computation. He has lived in epochs when the Flora and Fauna considerably differed from those at present existing ; he was the contemporary of a number of species now only existing in a fossil state ; and whosoever has formed an idea of the slowness of such changes effected on our globe, will easily convince himself that six thousand years constitute but a short moment in the life of humanity.

Human palæontology enables us to solve in a decisive manner a problem which has at all times occupied and divided the mind. Creeds spread amongst many peoples, represent the first men as superior in

strength, beauty, intelligence, virtue, to their degenerate posterity, and under various names assume a golden age of the dawn of humanity; whilst on the contrary many philosophers look upon the primitive ages as periods of profound barbarism and savagery. The latter opinion irresistibly flows from the study of the most ancient relics of the existence of man. What mythology has called the golden age is now called the stone age. The stone age is that long and dark period in which the use of metals was unknown. The first men lived in small wandering tribes, inhabiting caves, and possessing no other arms than fragments of flint, which they knew not even how to polish. At a period infinitely nearer to us their primitive industry became gradually more perfect. They learned to polish flint weapons, and fabricate rude pottery, to work bones of the stag and of other large animals into arms or other implements. The use of metals constitutes a second period. Copper, and bronze (an alloy of copper and tin), were the only metals known during many centuries, constituting the Bronze Age. Then came iron, a metal incomparably more powerful, but more difficult to extract and to work, which supplanted the former. From the period of the Iron Age, man, provided with irresistible instruments, was enabled to till the ground, to destroy the large animals, cut down the forests, build cities, and form nations. That hard metal which, in the language of the ancient poets, symbolised human perversity, characterises, on the contrary, in the eyes of modern science, the third age of industry, security, stability, and true civilisation. It was thus by an extremely slow progress that man gradually rose from a savage to a barbarous state—from barbarism to civilisation. This evolution, the different phases of which are described by archæology and palæontology, is still observed in inferior or less advanced races.

The antiquity of man once established, the obscurity surrounding the origin of humanity becomes still deeper as we penetrate the depth of time. Two doctrines, as old as the most ancient traditions, are brought here face to face. Many peoples of antiquity considered themselves as offsprings of the soil which bore them, and rejected all idea of parentage with foreign races; others, whose belief has become an article of faith among the greatest modern nations, make the whole human species descend from a single pair. These two doctrines, separated, as must be well understood, from its theological element, which must remain foreign to scientific research, are known in anthropology by the names of *polygenism* and *monogenism*. The questions allied with them are numerous and important. The first is that of *permanence of types*, of which we have already said a few words. The problem is to know whether the external modifications produced by the action of the media may induce in the physical characters serious

and definitive changes, and whether, in consequence of such changes, become hereditary, types so differing as the Ethiopian and the Caucasian types may be produced in peoples derived from the same stock.

This question of the origin and formation of races comprises a number of subjects which we shall merely enumerate. The historical documents not always possessing the desirable precision, and direct observation being impossible, analogy is appealed to, and documents are borrowed from zootechnics, more or less relative to the natural or artificial formation of races of domestic animals. But the data derived from this study can only be applied to man with the greatest reserve, since every group of animals can be subjected to particular laws, and because the methodic choice of reproduction, the special education of the products, the breeding in and in, and the determined direction of the crossings which form the principal means of zootechnics, have evidently never been applied to humanity, where the union of the sexes is never directed by motives of this kind. The study of the conditions under which this union is effected thus acquires great interest. The degree of resemblance or dissemblance in the parents is, indeed, far from being without influence on the results of the generation, and the two extreme cases of consanguine union and the crossing of individuals belonging to different races deserve to be carefully studied.

Although to a great extent removed from the causes which, in domestic animals, give rise to the formation of new races, man is not less subject to influences of extremely different and powerful media. He is, or rather believes himself to be, a cosmopolite. He bids defiance to all climates where other men can live, and his distant colonies constitute real experiments of which science must study the results. The action of a new climate may affect the health of the individual, his fecundity, the health of his offspring, and obstruct the preservation of the race. But when the race resists this test without having recourse to crossing, does it preserve its primary characters, or does it experience more or less profound transformations?

The social influences are not less deserving attention. To cite only one: Who can deny the anthropological importance of the institution of marriage and of its various forms? The promiscuousness of the sexes, polygamy, polyandry, monogamy, have so different consequences as regards the reciprocal selection of the parents, and the physical, intellectual, and moral education of the children, that frequently little more is required to understand and explain the destiny of a race. In the normal condition of things, woman's mission is not merely to bring forth children and to suckle them, but to attend to their early

education, whilst the father must provide for the subsistence of the family. Everything that affects this normal order necessarily induces a perturbation in the evolution of races, and hence it follows that the condition of women in society must be most carefully studied by the anthropologist.

The influences of climatic and hygienic conditions, of sexual selections and the social state, are not the only ones which may exercise a more or less durable action on the organisation of man. Peculiar practices, at times very grotesque, much spread among a great number of peoples, subject certain parts of the body to more less serious deformations and mutilations. Some, as tattooing, are quite superficial, forming, so to speak, the national costume. Others, as circumcision, piercing the ears, lips, or nose, the extraction or filing of the teeth, the amputation of a phalanx or of a whole finger, the constriction of the chest, the compression of the feet, the flattening of the nose, the ablation of a testicle, etc., alter the form and the functions of the respective organs and constitute real mutilations. Others, finally, the most serious and strangest of all, affect the conformation of the cranium and the development of the brain. These various manifestations of national fancies, more than once sanctioned by religious legislation, are not confined to the modification of accessory organs; they extend to the transformation of craniological characters, characters of the first order upon which the distinction of types is based. We may therefore say that to a certain extent they change the type of the individual; and if a whole people has for a series of generations been subjected to the same deformation, it may be difficult to detect beneath these artificial characters the natural characters of the race.

But here a more serious and more general question presents itself, that of hereditariness, climate, mode of life, the social state, mechanical mutilation and deformation, may, in unequal degrees, modify the individual without resulting in a modification of the race. Race is not merely an ensemble of individuals, but a series of generations. Even when all the individuals of a generation present a common character, is this character not that of the race, unless it is *naturally* transmitted to their progeny. Consequently a race can only be considered as modified when the new-born child, without having been subjected to the action of the various circumstances which have influenced the parents, already bears the stamp of the peculiarities which distinguish them, or at least ultimately shows these peculiarities as a consequence of natural development, *i. e.* without the concurrence of circumstances which have engendered them in previous generations. The study of the modifications produced in man by the action of media cannot

explain the question of the permanence or variation of type, unless it is followed up by the study of the laws and the phenomena of hereditariness. It is well known that most of accidental characters are not hereditary. The son of a peasant, tanned by the sun, is as white as the son of the most delicate citizen, and he would remain so were he not to follow up his father's profession. The son of a person who has lost a limb by amputation comes into the world with all his limbs; and if circumcision is still practised among the Jews, it is simply because the new-born children have not inherited the peculiarity from their fathers. But these are local modifications, lesions or alterations of organs, which only occupy a secondary rank in the functional hierarchy; and it may be asked if the changes of a more general nature affecting the constitution in its *ensemble*, or only an essential organ like the brain, may not in length of time, at the end of a number of generations, make part of the organism, become hereditary, and definitively alter the characters of the race. Thus the study of hereditariness, already so important in pathology, acquires a still greater importance in anthropology.

Individual spontaneous variations, which differ essentially from accidental or acquired variations just spoken of, may be transmitted for several generations, and by profiting of these spontaneous variations, by coupling animals possessing the same anomalies, breeders frequently succeed in producing new races. But the primitive type, although profoundly modified by these methodical perturbances, does not altogether lose its rights. It tends to re-establish itself despite the laws of direct hereditariness, and we see suddenly appear in the new race, in a certain number of individuals, one or several characters which do not exist in that race, and which altogether or partly reproduce the effaced type of the old generations. *Atavism*, that is, the resemblance to an ancestor more or less remote, is therefore engaged in a struggle with hereditariness, properly so called; and if the breeders did not take the greatest care to suppress or sterilise the individuals returning to the primitive type, the latter might finally absorb the whole race. It is a well known fact, that it is easier to make races than to preserve them. They all tend, as M. Flourens expresses it, "to unmake themselves" (*à se défaire*), that is to say, to return to their primitive type. This tendency not only exists in races obtained by selection, but in races obtained by crossing. In the latter case, the produced hybrids may, at the end of several generations, return all at once to the type of either of the mother races. But the phenomena of atavism may be observed in the human species quite as well as in domestic animals; so that the problem of the variability of type is not solved, if it were stated that an accidental charac-

ter is transmitted by hereditariness. It would still be requisite to investigate whether the laws of atavism do not reproduce at the end of several generations the ancient type which had momentarily been altered. This is sufficient to show all the interest which attaches to the study of atavism.

These are the chief questions which general anthropology comprises within its domain. We have preferentially cited such as, without distinction, interest all men of science, and such which possess a special interest for the physiologist and the physician; but we have been obliged to pass over a great number, in order not to lengthen this article. The reader will easily fill up the gap, if he attends to the definition we have given of general anthropology, or to that other less rigorous but, perhaps more striking, definition—*general anthropology is the biology of the human species.*

DAVIS AND THURNAM'S CRANIA BRITANNICA.*

OF the various branches of the science of anthropology, none, except some of those which deal with prehistoric man, can be said to have been originated in our own time, but several have received a development altogether out of proportion to their previous condition. Among these is craniology, the students of which have within our own times found it necessary, in order to express their ideas with precision and brevity, to coin an altogether new system of nomenclature, an introduction to even a portion of which, as exhibited, say, in Professor Owen's note to Du Chaillu's *Journey to Ashango-land*, would have been enough, one would think, to make the hair of the venerable Blumenbach to stand on end. The heads of Blumenbach and Morton adorn the title-cover of each decade of the *Crania Britannia*, in token, we suppose, of the admiration entertained by the accomplished authors of the work for the father and grandfather of their science. They were great men, and their names will live long; but the present generation have the advantage of standing on their shoulders, and certainly see much further than they could. Must we add, that the prospect unfolded to them remains yet misty and obscure? We fear so. None of the great generalisations of craniologists appear to us so securely fixed

* *Crania Britannica, Delineations and Descriptions of the Skulls of the Aboriginal and Early Inhabitants of the British Islands, etc., etc.* By Joseph Barnard Davis, M.D., F.S.A., etc., and John Thurnam, M.D., F.R.C.P.L., F.S.A., etc. London: 1856-65.

that men may safely and certainly build on them. Morton's views on the Egyptian and American skulls, for example, though ingenious and striking, are still as doubtful as when he put them forth; Retzius's classification has been shown to be erroneous in many particulars, for example, in the glaring instance of the brachycephaly of the Germans, whom he believed to be long-heads; and the value of his very basis of classification is impugned mildly by Barnard Davis, and more roundly by Professor Owen: and lastly, Dr. Thurnam's beautiful hypothesis of longbarrow-longheads has not convinced even his own colleague.

We may drag the ocean of phenomena long for valuable scientific generalisations; but if our net is of the right mesh, we shall surely in the end make captures worth striving for. The question is, whether the method employed by our authors is a good one, or is the best available? We think it is. Through years of patient labour Drs. Davis and Thurnam had been accumulating the stores of which samples are presented us in these volumes, copied with marvellous exactness by the unerring pencil of Ford. Never before, certainly, had representations of skulls been produced that could vie, in beauty and accuracy, with the sixty that form the texts on which the authors so lovingly and learnedly discourse. Nor do we think that any of the works on a similar plan with the *Crania Britannica*, which in several countries have followed and been as it were engendered by it, are comparable with it in this respect, nor indeed in the magnitude of the work or its general value; though such volumes as those of Nicolucci, and Ecker's *Crania Germaniæ Meridio-Occidentalis*, and those of some Swiss anthropologists, etc., are all of great value and interest, and too little known and studied in this country.

Certainly the interest felt among us in anthropological studies and pursuits increases year by year. Witness the long and ever-increasing list of fellows of our society, and the various stages of the warfare carried on at the meetings of the British Association for some years past, during which the progress of enlightenment and public interest in the subject has scarcely ever sustained even a momentary check. Who, two or three short years ago, would have dreamed of an Anthropological Congress in Dundee?

It is hard, however, and tells very unfavourably upon our progress, that considerations of expense hinder, in this country more than in most others that boast themselves civilised, the publication of works like the present. To bring out a costly volume by subscription requires an immense deal of trouble on the part of author or friends to secure the requisite number of supporters; and we doubt very much whether even the long array of subscribers, headed with the

names of imperial and royal highnesses, and the titles of metropolitan and university libraries, can have saved Dr. Davis harmless in the matter of expense merely; while of course all the labour of many years which is here concentrated and condensed, must be expected to go entirely unrewarded, save by the scientific reputation, not merely British but world-wide, that has accrued to the authors, and by the consciousness of having made a donation to anthropology the like of which she had not yet received.

The book furnishes a very favourable example of the results of the method of hunting science in couples, which is much more practised abroad than in England. No scientific man, or member of the medical profession, would have any difficulty in naming dozens of instances in which two savans have worked together amicably and with reciprocal benefit for the elucidation of some obscure department of their science, or for the publication of their separate investigations. So much has this been the custom in France, but still more in Germany, that there are numbers of names familiar to us as household words, every one of which cannot be pronounced without suggesting that of a collaborator, his twin in reputation now and for ever. Who can think of Bidder without Schmidt, or of Thenard without Gay-Lussac? To most of us Neubauer is inconceivable without Vogel, and Rilliet without Barthez, or Bernutz without Goupil; and finally, it was but the other day that Fick and Wislicenus, like a double star rising over the Faulhorn, illuminated the field of food chemistry.

We suppose it is the bristly individualism of our countrymen which hinders them from entering into similar combinations, for nothing short of the constantly imminent peril involved in a scramble over the Rocky Mountains, or a sojourn among Ethiopian despots of the Theodorus and Kamrasi types, seems capable of welding together permanently a couple of English savans. Much honour, therefore, is surely due to our pair of authors, who, without sacrificing to each other their independence in matters of doubt and opinion, have been able, through the whole course of a joint labour, occupying several years, to work in perfect parallelism of purpose and execution, dovetailing, so to speak, the results of their separate studies and observations, so as round into one perfect and harmonious whole the greatest work of modern English, perhaps we should say European, anthropology.

The original idea, and the general plan and responsibility of the work, belong, we believe, to Dr. Davis, but Dr. Thurnam had formed a separate scheme before the union of the two. The descriptions of the skulls are due, some to the one, some to the other anthropologist. The remainder of the text consists of nine chapters, of which the fifth, which is by far the longest, and is entitled the "Historical Ethno-

graphy of Britain," is the contribution of Dr. Thurnam. It contains an elaborate, learned, and beautifully illustrated account of all that is known of the earlier inhabitants of Britain, down to and including the Roman period. The remaining chapters we owe to Dr. Davis. They include, besides some shorter and less important ones, a very interesting treatise on distortions of the skull, a subject well known to be eminently the author's own; an ethnographical sketch of the successive populations of Britain, and a somewhat compressed but valuable account of the distinctive physical and moral characteristics of its present inhabitants, embodying not only his own observations but those of numerous other anthropologists and naturalists in various parts of the country. We have already hinted at the existence of certain differences of opinion between the authors. These in no degree impair the coherence and consistency of their work, in which, however, may be found the greater part of the evidence which, variously interpreted, has served as the foundation of the theories alluded to. Dr. Thurnam's views as to the existence of successive races in the so-called Celtic period, of which the earliest was short in stature, short-faced, and long-headed; and the second tall, large-featured, and short-headed, have been made fully known to the Fellows of the Anthropological Society, and to the scientific world at large, by his elaborate papers on the subject in the Society's *Memoirs*. We believe he adheres to the theory there expressed, which has been strengthened to some extent by certain of the Rev. W. Greenwell's discoveries in Yorkshire. On the other hand, Dr. Davis seems to remain unconvinced of its truth, attaching much greater importance than his colleague does to the quasi-accidental variations of the form of the skull that occur in every race, as well as to the influence of certain causes of distortion, developmental, nutritive, or posthumous. And Dr. Hunt's discoveries in the barrows of Dorsetshire appear to strengthen Dr. Davis's defensive position. With respect to the interesting controversy as to the relative proportions of Saxon and British blood in the modern English nation, on which so much light has been recently thrown by Mr. Pike, these volumes supply a mine of information, to be found chiefly in the chapters which bear the mark of Dr. Davis. On the whole, we should say that he attributes more importance to the Teutonic blood-element in England than Mr. Pike would probably be willing to allow.

J. B.

THE EXTINCTION OF SLAVERY IN BRAZIL, FROM A PRACTICAL POINT OF VIEW.

THIS important social question has for many years occupied the attention of all practical and non-sensational philanthropists in the growing empire of Brazil, and it is with great pleasure that we present, in a concise form, the results of the experience of Senhor A. M. Perdigao Malheiro, a gentleman well known in that country as an ardent and patriotic statist and philosopher. The following letter from Captain R. F. Burton characteristically and admirably introduces the subject, and renders any further remark unnecessary.

Writing from Rio de Janeiro, June 1st, 1867, Captain Burton says :

"The language of the writer is that of a man who has deeply studied the subject. His moderation and practical wisdom, qualities not often united in the Latin race, contrast strongly with the violence and the ignorance displayed by some Anglo-Saxons. The fact is, that the Brazilian, like the 'Southerner,' knows the negro, and justly esteems him as a slave. The Englishman, so wise within his own island, and so strangely unwise out of it, knows nothing of Africans except by traditions that deceive him; can know nothing, because he still listens with fond fraternal love to the false witness of missionary humbugs; and will know nothing, because his truly national complacency and self-esteem, not unoften degenerating into bull-headed arrogance, persuade him that he knows everything.

"M. Malheiro, curious to say, has not dwelt upon the most important point of his subject, namely, the natural extinction of slavery in Brazil. The negro death-rate greatly exceeds the birth-rate; the importation is definitively at an end, and the studies of the last two years enable me to assert that, taking for a basis the present ratio of decrease, the servile element will have completely disappeared from the southern and central provinces of the empire, whilst it will have been reduced to a minimum in the northern and most tropical before A.D. 1887. Upon one subject M. Malheiro and I join issue. The Brazilian citizen is, as a rule, humane to excess. The demoralising punishment of the lash and the gibbet shock the national sensibilities. The question is, 'Can society, in the present state of the empire, be adequately defended without flogging and putting to death?'

"I believe that it *can not*.

"Acknowledging no right in society to take the life of a fellow-creature except absolutely for self-defence, I find in Brazil that man's life and property are not safe without execution. The reformatories are not sufficiently numerous, the gaols are not to be trusted, and

the frightful murders here committed by the headstrong and half-reasoning negro are, I believe, on the increase, and the murderers should be placed beyond the power of repeating their enormities.

"At the same time I blush, as an Englishman, to see the backs of our free-born soldiers and sailors torn by the lash, and the hanging of women in Great Britain is one of those scandals with which she still edifies the world. I am, however, lapsing into an essay. *Ergo*, adieu. —Yours, etc., R. F. BURTON."

M. Malheiro addresses himself thus to the editor of the *Jornal do Commercio*, at Rio de Janeiro, the 13th April, 1867, and the communication is published in the number of the 17th April of the same year, and we are indebted to Mr. Richard Austin, of Rio, for both the foregoing letter and for the following translation, which we have, however, slightly compressed:—

"As a service to the public, and a special favour to me, I will request you to give publicity in your estimable paper to the following article, which is simply an abstract of a plan which I have elaborated and drawn up on the important question now occupying the attention of the country and its government, as officially declared in the reply of the 22nd of August of 1866, to the French Abolition Society, and in the *Diario Official*, No. 98, of the present month. I hope not to be accused either of trifling, exaggeration, or rashness.

"These ideas are the result of a conscientious study of the question, which I shall hereafter take an opportunity of enlarging upon in Part III of my *Essay on Slavery in Brazil*, now in hand.

"The question of slavery amongst us is one of the greatest importance and the most intense gravity, for it not only affects private interests deserving of every consideration, but also most directly the well-being of the public. Labour, above all field-labour, is almost exclusively confined to the slave from Pará and the Amazon up to Rio Grande do Sul, and from Cape St. Agostinho to Cuiaba; even in the provinces, where slaves are becoming scarce, as in the towns and villages, slave labour still exists.

"The slave population numbers at least one million four hundred thousand individuals, and according to others one million seven hundred thousand (*Padre Pompêos' Geography*, 1864), or even two million, or two million five hundred thousand in advance. The chief source of the public wealth, the most important element of support to our commerce, the culture of the earth, is in most cases effected by the slave. Without agricultural productions our commerce cannot even be maintained. Manufacturing industry, the mainstay of other countries, in ours is as yet in its infancy.

"So that to attack slavery, to transform slave labour into free, is not only completely to change the aspect of our society in its populous centres, but also, and principally in the country, it is to touch our chief source of production, and consequently of public and private wealth. On the other hand, it is to sever relations between master and slave, between obedience and command; it is to destroy the existing organ-

isation of those social circles, the basis of our great social status, however imperfect that organisation may be ; while it is to be feared that its transformation cannot take place without a shock to the social status which will recoil upon the state. Precipitate measures may produce not only incalculable disorganisation, but also dislocation of public order, and such a reform involves a crisis which we ought to have the power to encounter ; it is a peaceful revolution in favour of the real, moral, and material well-being of our land. As emancipation must and will take place (morally, and in idea the public mind has already accomplished it), it is only a question of method and opportunity, which, though apparently easy, really offers many difficulties.

"I. OPPORTUNITY.—Were it not for the extremely critical circumstances in which the war with Paraguay has placed Brazil, continuing as it does to drain her lives and finances, the matter might at once be brought before the Legislative Chambers, and the Government ought to undertake the passing of necessary measures, in the same manner as was done in 1850 in reference to the African slave trade. As long as the war lasts, however, the matter should not be taken in hand by the Legislature, from a consideration of the consequences which might arise to the prejudice of peace and public order.

"Besides, the Government should have at its disposal an armed force capable of maintaining peace and order, and of protecting the inhabitants under certain eventualities, which, for the present, is out of the question. To attempt half measures would be worse still, inasmuch as experience has taught us that in matters of this nature it is better either to let them alone or boldly and promptly to attack them with proper remedies.

"In the meantime measures might be taken to facilitate immigration,* also in matters relating to mixed and Catholic marriages, the concession of lands, extension of intercommunication, and other correlative questions.

"I do not mean, however, that the solution of the problem should be indefinitely postponed. This is no longer possible. Indeed we should be forced into granting it on the one hand by the opinion of civilised nations and the ideas of the age, and on the other by the country itself ; in fact, it may be forced upon us without liberty of action and choice. The Legislature and the Government ought to address themselves to it as soon as the war is over ; peace will restore the country to its normal condition ; and although the financial condition will be unfavourable and the public debt enormously increased, a smiling future is to be hoped for. The productive powers of a rich, young, and vigorous country such as ours should not be despaired of.

"II. METHOD.—This very delicate and complex question has been long in agitation. In the Legislative Assembly various projects were offered as long ago as 1831, and again in 1866, regarding the national slaves, and those being private property.

"Immediate emancipation is absolutely impossible at the present

* This is now being done—skilled labourers and small capitalists receiving aid in various ways from the Brazilian Government in the purchase of lands, etc.—*ED. A. R.*

juncture, nor is it even proximate, because the great number of slaves existing among us prohibits it. It would involve a hasty transition of the million, or nearly two millions, of slaves, from slavery into freedom, to the obvious injury of all parties of the State, as well as the slaves themselves; public safety would be in very great peril, as recent events have shown in European colonies; while the occurrences which have taken place in the American Union should be a lesson to us to guard against similar errors. Moreover, the public exchequer could not defray such a sum; the total, estimating the slaves at one million five hundred thousand only, and at 800 mil reis (on an average) each, would amount to 1,200,000,000 mil reis, or £12,000,000 sterling. Leaving it to time and natural causes, as some advise, the slave having a tendency to disappear by death, enfranchisement, and disproportion of births, would be equivalent to inaction or the retention of the evil without providing any remedy.

"These extremes have a pernicious tendency. A combination of direct and indirect means, therefore, is what should be attempted to bring about the utter extinction of slavery in Brazil. To do this, in the first place it is necessary to ascertain from history and the present law the causes of slavery, so as to assail it from its origin. From the slave trade there is no longer anything to fear. It is extinct. (*Report of Ministry of Justice for 1866.*)

"Birth still remains a legitimate title, since it is so constituted by law, and in my opinion is the only legal title in existence. But according to statute 4, cap. 63, by many held to be still in force, and as it has been decided in the courts of the empire, the revocation of freedom for ingratitude on the part of the freed man is likewise a legal title; yet many, and I among these, regard the statute as abrogated, although not actually revoked.

"The cardinal principle, the corner-stone of reform, would be a proclamation of liberty from birth—in other words, emancipation from the womb, as maintained by me in a discourse, since printed, pronounced at the grand Session of the Institute of Brazilian Advocates, September 7, 1863.

"And there should be an implicit declaration also to the effect that statute 4, cap. 63, is abrogated; requisite, in order to avoid a continuance of the divergencies of opinion, the main cause of the uncertainty of the law, and very prejudicial to reformation. Nor is this all. What guarantee is there for the thus free-born offspring of slave mothers? What guarantee regarding existing slaves? What complementary measures ought to be adopted?

"In so far the children are concerned the rule should be, I am disposed to urge, that which guides the legislature of several other states, and especially the American Union, viz. that they be allowed to remain with their mothers, to be reared and educated under the protection of the owners of the latter; the owners, by way of compensation, having a right to their services gratuitously until, say, they become of age, when, according to our laws, they become eligible for all the duties of civil life and minors for emancipation.

"Thus all things would be conciliated; the humanity and charity,

so characteristic of the Brazilian, would be vindicated ; order would not be disturbed, nor social customs ; the freeing of the slave-woman's offspring, to be reared and educated by the former, being of frequent occurrence, even without reservation as to their services ; the minors would thus gradually be fitting themselves, particularly in country districts, for free labour, thereby warranting the expectation that slave labour would, by this method, be gradually transformed into free, with great private and public advantage.

"There is a complicated preliminary question to be solved as regards the slaves at present existing as such, in spite of its seeming simplicity. Is it desirable that a definite period be forthwith fixed for their ceasing to be slaves ? or should the question be reserved for ulterior deliberation ? When shall that period commence ? whether with indemnity or without ?

"Since the end to be attained is the complete extinction of slavery, it would seem more desirable to appoint a final period, similar to the determination of other nations, and with a view, moreover, to the prevention of abuses, which might reasonably be apprehended, that some individuals would be retained in a state of slavery who were legally free ; and because, if the evil of slavery ought still to be endured for a season, upon well-weighed grounds of public and economic order, as well as out of regard for private property, this same public good (the first always to be thought of, even to the prejudice of private interests), would advocate that this toleration should not be of indefinite duration ; slavery and freedom are matters repugnant and contradictory to one another.

"But, under such circumstances, when should this event or period commence ? Consistency would be maintained by making it correspond with that fixed upon for the gratuitous services of the offspring of slaves born free according to law. This period, however, should be a solemn one, memorable for some religious event of great importance, the better to awaken consciences, and in a marked manner to signalise emancipation. Thus Christmas-day, the anniversary of all that is peculiarly solemn to the Christian mind, a day of rejoicing and festivity, would seem a suitable one ; just as Christ introduced religious and moral reform, liberty, civilisation, and advancement, so also the anniversary of his birth should bring liberty to those who may be born on such a day ; and upon that same day, when they shall have completed their twenty-first year, those might be freed who existed as slaves.

"The Jews had their Sabbatic year, and the Jubilee, in which slaves became free. For the Christian it should be the Christian year. The Benedictine Order selected the 3rd of March, 1866 (the Invention of the Holy Cross) to proclaim free the offspring of the slave-woman of the order who might happen to be born from that day forward.

"It is my opinion, however, and one which I formally declared in the discourse of 1863, to which I have had occasion to refer, that it is more desirable to reserve this question ; the present condition of the empire makes this advisable, more particularly for the sake of order and the well-being of society. The postponement of this decision does

not present the same drawbacks that a premature measure would, save where it was purely illusory.

"But, in the event of a definite period being fixed upon, ought owners to be compensated for the value of slaves which they may legally hold at the time? This difficulty has already been suggested to us by his Excellency the Viscount de Jequetinhonha, in the *Jornal de Commercio*, July 3, and August 14, 1865. A negative, which otherwise is compatible with the absolute right entirely ignoring this property—the slave—would have the great advantage of not burdening the public exchequer with an outlay which cannot be readily estimated, and consequently of not taxing the finances of the State by the augmentation of this item, when its debt to-day, owing chiefly to the war, is much greater. But inasmuch as the slave is by law real property, it should be respected as such; it is so ordained by positive right itself, human law, the only power by virtue of which slavery exists. Compensation is therefore an act of justice not only to the owner, but as affecting third parties, particularly where slaves may be hypothecated or given in pledge; or at least it is beyond doubt a matter of equity, since it is a property held and subject to negotiation under the protection of the law.

"Having disposed of these capital questions, further measures should be taken to facilitate emancipation by indirect means as well as to better the condition of the slaves, and in like manner to regulate the new relations naturally emanating from those new arrangements. Thus:

"The object being to facilitate manumission, it were desirable—1st. To secure to the slave his profits—that is, what he gains legitimately for himself by his industry for the benefit of his owner or a third party, or fortuitously, and being allowed to ransom himself by this means. 2nd. By allowing the slave, when he has to be separated or sold through force of circumstances, to ransom himself or be ransomed by another by valuation. 3rd. By proclaiming free all slaves left by issue, the effects of defuncts and absentees, and unclaimed slaves, wherever there is not a purchaser, which happens, as a rule, from their being, in such cases, old, infirm, unable to work (as facts prove), and therefore worthy objects of such a boon, the owners or heirs not having any right to make claims for compensation. 4th. Such as are abandoned by their masters as infirm and unable to work should also be proclaimed free; the owners, however, when known, being obliged to support them, or pay for their support, provided they can afford it. 5th. Freedom to be granted gratuitously to the slave who renders valuable services to his owner, or any member of his family, such as saving life, rearing his offspring, and the like. 6th. Freedom to be granted by means of compensation to the owner for meritorious services rendered to third parties, and, above all, to the State and to religion. 7th. Freedom to be secured to the slave who, with the direct consent, or even tacit acquiescence of his owner, contracts marriage with a free person, or who establishes and conducts himself as free in any branch of industry, profession, or even public service. 8th. In like manner to the slave who may be seriously injured by his master, or his wife or children, including the offence defined in

Article 219 of the Criminal Code. 9th. That a married freedman, or any one in his behalf, may ransom a married slave and her offspring ; it is the protection of the family status.

"These measures would combine to improve the condition of the slave, while they indirectly promoted emancipation. But it would be desirable to adopt further steps for the same object, such as—1st. To prohibit the separation of husband and wife and offspring under age, thereby recognising family rights, enabling them to transfer their families when they become free into the society of the free. 2nd. To prohibit the sale of slaves by private or public auction, it being a degrading custom, and offensive to public morality. 3rd. To prevent slaves being ill-treated by their owners, whether morally or physically, and to endeavour to promote humanity towards them. 4th. To reform the penal law and criminal process, abolishing flogging, irons, and capital punishment. 5th. To grant them access to preparatory schools ; it is desirable they should receive a certain amount of education, religious and secular. 6th. To permit slaves to hold property, with a view to their not only being able to emancipate themselves, but to create a taste for labour. 7th. To do away with mortgages and embargoes upon slave property, excepting in agricultural establishments. 8th. To encourage marriage, the origin and basis of the social state.

"As to slaves belonging to the nation, and to convents and fraternities, they ought to be emancipated forthwith, but disposed of suitably, measures being taken to guard against injurious consequences. It is unbecoming the national dignity to own slaves. Every inhabitant of a free country ought himself to be free.

"It is yet more unbecoming and unchristian that religious orders should hold human beings in slavery, and even live by the sweat and labour of the slave ! It is contrary to every precept of the Divine Redeemer, and contrary also to the solemn protestations of the profession. This emancipation ought to be effected without compensation. The State has an absolute control over the whole property of the fraternities. These might be settled on the lands to which they pertain, or on others to be assigned them, thus forming colonies, or else distributed among the already existing colonies, especially the military ; they might be also adapted to other modes of employment in conformity with their capabilities and taste.

"Further precautionary measures would be necessary, such as—1st. A summary process in the civil courts for questions respecting slaves and freed. 2nd. Exemption from costs as regards themselves, as they already are from stamp duty, '*dezima*,' and other similar taxes. 3rd. The protection and co-operation of the public authorities in securing their rights to them, and in watching zealously over those rights. 4th. In all such matters to dispense to slaves and free the utmost amount of equity and justice. 5th. Reformation of the laws relating to location of service, adjusting these to their new wants. 6th. Police measures—above all, correctional police—to take summary notice of matters not strictly pertaining to criminal law. 7th. Amplification of the 179th Article of the Criminal Code, and special

judgment for the case, with a view to avoiding the evil and punishing it effectively. 8th. To declare the free eligible for public service, the usual and ordinary conditions being fulfilled, with the sole exception of the restrictions laid down according to the constitution of the empire.

"To these might be added the apportionment forthwith for purposes of redemption by the State, all taxes originating from slavery itself, such as the annual tax of the '*matricula*,' the '*misa-siza*,' the '*dezima*,' those derived from heritage and legacy, and from the process of qualifying heirs when treating of slaves, the tax on registration of dowries in slaves and others, by that means organising an emancipation fund, to be applied according to the judicious decision of Government.

"Such are, in my opinion, the principal precautionary steps. These measures of legislation would be suitably developed in the regulations and instructions, which would render the whole scheme of emancipation complete, and would establish the best practical method of attaining these great objects.

"Recapitulated, this plan would comprise the following recommendations:—1st. The immediate abolition of the propagation of slavery; the increase of the class of freedmen, even though they emerge from the servile class. 2nd. Organising the family status in that class, wherein slavery had entirely destroyed it. 3rd. Creating in them a fondness for labour for themselves, and restoring to them the right of property and other rights. 4th. The moral and religious education of these beings. 5th. Protecting the slave and the freed, the owners and society. 6th. The averting of a sudden and unexpected scheme of emancipation. 7th. The reclaiming of the slaves themselves and the freed, for their own good and that of society, and the gradual transformation of slave labour into free. 8th. No disorganisation of the existing system of labour, especially agricultural labour, and thus the averting of an economic catastrophe, which otherwise might happen. 9th. The not burdening the exchequer with compensation for a forced and sudden emancipation, yet without impeding emancipation, but only rendering it more gradual. 10th. Thus ensuring for the country a future full of promise and worthy of the age, exalting it in its own estimation in the opinion of the world at large, and in that of posterity."

At a time when the whole question is forcing itself upon the attention of statesmen in all parts of the world where the institution has existed, this scheme of gradual emancipation merits the utmost consideration of all who desire the well-being of man.

PHYSIO-ANTHROPOLOGY AT EDINBURGH.

THE paper read last Session by Dr. Hunt on Physio-Anthropology, before the Anthropological Society of London, has created considerable excitement among the phrenologists in various parts of the country, and among the various associations for that branch of inquiry. The Edinburgh Phrenological Association has chosen to make some further demonstration of opinion on the paper, as will be seen by the following discussion which took place at the annual social meeting of the 21st October, 1867. After the ordinary business of the meeting had been disposed of, the President (Mr. A. Reid) stated that Dr. Hunt's paper was being carefully considered and discussed at the ordinary meetings of the Association, and remarked that it would have been gratifying to the members of the Association if they could have had Dr. Hunt present at these discussions, as they then could have asked him to define himself more satisfactorily than he had done in his paper, and to cause him to hold by blowing hot or cold, but not both, on the "bastard science of phrenology," as Dr. Hunt has styled it in his address at Dundee.

Mr. J. W. Jackson, F.A.S.L., then said that he had more than ordinary pleasure in addressing the meeting on that occasion, inasmuch as he had noticed that a general misconception seemed to prevail upon the tendency of Dr. Hunt's paper. It was one of the most important events in the history of phrenology that it had thus been introduced to the notice of the Anthropological Society of London. The speaker trusted to remove the adverse impression which appeared to exist on this subject. He would, however, not derange the order of the remarks he intended to make on the history and prospects of phrenology. He would proceed to make a few observations on the errors of their predecessors, and on the manner in which their deficiencies may be supplemented, and add to the list of their discoveries by an employment of clearer views and renewed energy. First, it was to be admitted that from the absolutely inductive method in which the several organs now constituting the phrenological chart were discovered, by a most careful comparison of character with cranial contour, extending over many hundred individual instances, it was almost unavoidable that Gall and his immediate followers should be organologists, thus exaggerating the importance of particular organs, regarded

separately, and proportionately undervaluing the grander outlines of cranial contour. In accordance with the materialistic spirit of the age in which they lived, they assigned too much importance to quantity while disregarding quality. They continually rang changes on size of organs and volume of brain, while temperament was spoken of rather incidentally, till at length it came to pass that large heads were regarded practically as the test of superior endowment. Cerebral development was also regarded as almost the sole index of character, and consequently they underestimated the significance of the remaining portions of the organism. They were but imperfectly aware of the importance of respiration, alimentation, and locomotion to effective cerebration, and hence were not sufficiently careful in their observation of the chest, the abdomen, the limbs, and the extremities. They did not sufficiently understand that the organism is a structure integer, and not a mere congeries of isolated organs and independent functions. These errors marked the progress from ignorance to knowledge. After a pause of nearly a quarter of a century, phrenology has entered upon its second phase of development, and the original founders of the science have lost much of their hold upon the reverence of the men of the present age. The speaker then urged on the meeting the necessity of looking to the future rather than to the past, so as to prepare for the demands modern science is likely to make upon professors of phrenology. It was necessary to cease being only cerebral physiologists. Physiognomy must be studied, a bipolar relation between head and face being admitted, the functional activity of the former being often predicable from the predominant expression of the latter. Temperament should be studied in connection with anatomy and physiology, to learn their reaction on cerebration. The brain must also be studied pathologically, as to quantity, quality, and contour. This would supply a new chapter to medical science, supply the physician with data hitherto unknown for estimating constitutional tendencies. It was desirable to advance from human to comparative phrenology by a careful comparison of the brains of brutes with their known habits and instincts. This should extend from the simplest radiate, through the mollusca, articulata, and vertebrata, up to man. The vertebrata would probably be found the most interesting, and among these the mammalia, as nearest to man; but the lower divisions should not be neglected; as in the articulata, for instance, we find the ant and the bee, with whom blind instinct assumes the form of high intelligence. In such an inquiry it is most important to take into consideration the racial diversities of man, and by a careful comparison of these different types to endeavour to ascertain the conditions which determine their respective places in the scale of rational being. In this

phrenologists would be aided by a study of those grander divisions of the nearly allied Mammalia, termed by Professor Owen *Lyncephala* (small-brained), such as kangaroo; *Lissencephala* (smooth-brained), such as sloth; *Gyrencephala* (convoluted brain), such as ape, lion, dog, elephant—approaching so nearly, yet differing so widely, from the *Archencephala* (governing brain), whereof the only existing examples are the various races of man. Without insisting on the truth of a suggestion already familiar to some present, that man, as the aerial type of these quadrupedal mammalia, must ultimately produce profoundly correlative orders, species, and genera, whereof existing races and varieties are the germinal beginning, and contemplating the mammal brutes as simply the type of sentient being most nearly allied to man, we may be sure that a carefully-conducted study of their habits and instincts, as compared with the simplicity or complexity of their cerebral structures, cannot fail to throw considerable light on the capabilities of the various races of man. The speaker specially commended for study those animals susceptible of domestication. Their anatomical and physiological specialities should be compared with those of the wild and irreclaimable varieties and species; and do these specialities throw any light on corresponding aptitudes and inaptitudes in their human correlates?

From this it would at once be seen what vast provinces of inquiry await investigation beyond that narrow round of recognised organology and temperament which phrenologists have been so contentedly treading for the last quarter of a century; that is, since he, whose labours we have now met to commemorate, had passed the meridian of his powers. And here (said the speaker), were George Combe once more among us—clear-headed, vigorous, expansive, and receptive, as he was at five-and-thirty, he would be more dissatisfied than any man in this assembly with the fossilised condition of existing phrenology, and would apply himself with all the victorious force and unwearied assiduity of the olden time, to enlarge the boundary of its investigations, and to place it abreast with the wide aims and profound views of contemporary science. And this brings me to our present position and the duties arising from it, more immediately in relation to the recent discussion on physio-anthropology during the last Session of the Anthropological Society of London. This discussion, as already remarked, inaugurates a new era in the history of phrenology. It places it once more in the list of living sciences, and as a necessary accompaniment of this new position, our time-honoured conclusions are questioned and our traditional ideas are disturbed. Some here are very indignant at the intimation that phrenology is based on unfounded assumptions, derived from the older systems of mental

philosophy, which preceded it. But, contemplated, from the standpoint of positivism, such a conclusion is unavoidable. So viewed, phrenology is still very largely in its metaphysical stage, and would be defined by a rigid follower of Comte as a philosophy rather than a science. Now, it is not necessary to be angry at this. Positivism, which may be defined as induction in its ultimates, was unknown in the earlier days of Mr. Combe, and was, of course, never dreamed of by Gall and Spurzheim. Its severity would have astonished Newton, and probably appalled Bacon himself. It inaugurates the reign of facts as opposed to that of ideas; and, left to itself, would probably enthrone the concrete on the ruins of the abstract. In the logic of events, its advent was unavoidable. Its apostles are worthy of all honour, for it is their vocation to work at the foundations of knowledge; to see that these are trustworthy and secure. Their business is to look to the stability of the edifice of science, by the exclusion of all unsound blocks from its structure, and by insisting on the most rigid adherence to the plan of induction in the process of its edification. Phrenology, subjected to their ordeal, will emerge with its facts confirmed and its hypotheses destroyed.

Again, some seem astonished that our anthropological friends should speak of reinvestigating the entire subject of cerebral structure and functions, *de novo*, as if nothing certain had yet been ascertained as to the relation of the latter to the former. But why should we be offended at a proposal which, if honestly carried out, can only eventuate in the establishment, on a yet firmer basis, of those great truths whereof we have been for so many years the despised witnesses? Would any astronomer object to a society of distinguished men determining to repeat the observations and verify the calculations on which his science professes to be based? It is the same with the chemist and electrician. These gentlemen know that a reinvestigation of their accepted facts can only eventuate in their confirmation. And is there any reason why we should be animated by less confidence, or more alarmed by such iconoclastic zeal on the part of our new converts? If I have interpreted our attitude aright, during the many long years of patient expectancy in which we have waited for such an event as the present, we have desired and courted rather than feared a thorough and searching investigation of the facts and principles of phrenology, feeling assured that in all its main facts and grander conclusions, it would emerge unscathed from the process.

And, lastly, some of you seem offended at the contemplated change of terminology, more especially the disuse of the term phrenology. But on this subject I think we may remain comparatively easy, as, unless our friends the anthropologists succeed in founding an entirely

new scheme of cerebral physiology, it is not likely they will prevail in imposing a new nomenclature on a province of inquiry, where they are as yet utter strangers, and wherein their labours will, as we apprehend, eventuate not in the discovery of fundamental laws, but at most in the addition of corroborative and supplementary facts. This, however, is a question, the consideration of which may well be postponed to a future occasion, when we as phrenologists shall doubtless be parties to the settlement.

This brings me to the conclusion of my remarks, and to the object which I consider of more importance than anything yet touched upon. I allude to the possible union of phrenologists and anthropologists, if not in one society, then at least as closely allied and intimately associated bodies, avowedly devoted to the same grand object, namely, the science of man, pursued, not in subjection to traditional ideas, but in strict obedience to the teachings of nature.

Of this science, phrenology, or cerebral physiology, or physio-anthropology, constitutes a most important province, and I trust, therefore, that the day is not far distant when every anthropologist will also be a student of phrenology, and when, conversely, every phrenologist will feel an enlightened interest in the progress of that yet larger and more comprehensive branch of knowledge which we term anthropology. And it is as a step in this direction that we should rejoice at the recent discussion in London, inaugurated by the manly and fearless address of Dr. Hunt, who has thus doubtless initiated a movement which cannot fail to be productive of the most important results to the science of man.

After some further discussion, the meeting then adjourned.

At a subsequent ordinary meeting of the Association, held on the 30th October, 1867, the President, Mr. A. Reid, made the following observations :—

It is stated by some authorities that human society passes through three phases—the theological, the moral, and the intellectual. Without holding myself responsible for the order of sequence, I think I am quite right in believing that the present age is passing through the intellectual phase. Machinery has been improved by intellect, and we can by steam go as far in an hour now as formerly we could go in a day, both by land and sea. In the same manner we may contrast the kite of Benjamin Franklin with the modern electric telegraph. Without carrying our observations into all the channels of the intellectual activities of the age, it may suffice to observe, that when we are satisfied that the achievements of man's intellectual nature are

so great, it is surely a becoming study for us to understand what we can regarding the source of this power.

In very many of the operations of his nature, man is not greatly distinguished from a great number of the animals below him; in some, indeed, he is their inferior; it is our duty, therefore, to endeavour to understand wherein he differs from even the highest of the lower animals.

Phrenologists claim for him, as the cause of his difference, the superior development of the frontal region of his brain, in which they state his intellectual character is located, and his additional development of a moral or coronal region, which the lower animals have not. In these regions, in addition to the aggressive and domestic regions of his brain, phrenologists believe they have produced sufficient evidence to warrant them in holding that each region contains a certain number of faculties or functions, each of which is performed by its distinct organ. This claim has been lately called into question by Dr. James Hunt in a paper he read before the Anthropological Society, and, so far as the chief point of his attack is concerned, he is justified in so doing; but it is a fact worthy of being remembered, even by Dr. Hunt, that "those who live in glass houses should not throw stones"; this, I think, has not been remembered by him whilst descanting upon the causes of failure in the science of phrenology. It is right to demand of any science that no terms should be used which contradict the facts it declares to have proved. Dr. Hunt makes his chief attack upon the phrenological axiom, "that the brain is the organ of the mind," which he designates "a gigantic assumption," because "we know nothing of the mind." "We only know of mental phenomena in connection with a nervous system." Does Dr. Hunt name any phrenologist who asserts the contrary? The brain is asserted by phrenologists to be the "organ" (in a collective sense) by which, or through which, mental phenomena are evolved. I am not aware whether the founders of phrenological science (I beg Dr. Hunt's pardon for using the term science) held the belief of mind being an entity separate, and independent in existence, from brain; if they did, I, as a "modern" phrenologist, disclaim connection with such, and demur to being designated "unscientific" in what I hold, and am prepared to teach, upon phrenology. Dr. Hunt must surely know that it is taught in the best works of phrenologists that "the brain is not a single organ, but a congeries of organs," endowed with separate and distinct functions, and that the philosophical idea of entity of mind is not the belief of the best authorities in phrenological literature. It is not to be wondered at, however, if some authorities in the science are found to entertain such belief, when we consider the speculative

condition of mental science at the time when Gall came before the world with his discoveries. The theological, and not the scientific, mind was the source of such speculations.

It not being my object, in noticing what Dr. Hunt has said about phrenology, to defend any position held by phrenologists that is inconsistent with the known facts of mental science, I wish only to point out where I think Dr. Hunt has shown that want of scientific exactness that he attributes to phrenologists as the cause of their having failed to exalt phrenology into the rank of a science; and it would have tended much to support his claims to scientific exactness if he had given some physiological proof when he made the statement that "all intellectual phenomena are functions of the nervous system or of the entire body." Let us keep the doctrines of phrenology out of view for the present, and ask who are the authorities in mental science that teach, or who would endorse what Dr. Hunt here states? We have heard, and still may hear, people speaking as if the heart and chest were the seat of the mental emotions; but surely we must expect some better acquaintance with the laws of physiology by men professing to speak and investigate with scientific exactness. It would be about as exact to assert that the whole muscular system was engaged in the act of respiration, because they are muscles specially employed in this function, as to believe that the whole of the nervous system is employed in evolving "intellectual phenomena," because this evolution is the result of nervous function. The merest tyro in physiological knowledge is aware of the influence of sympathetic action in muscular and nervous function, but to believe that this has anything to do with special function, which every nerve and muscle in the body possesses, is an induction I refuse to follow.

Now, how does the case stand with phrenologists as regards scientific exactness in their inductions? They believe the brain to have the following regional divisions, viz., the intellectual, moral, aggressive, and domestic, to each of which there belongs a series of sub-divisions into what they term organs, which perform functions distinct from each other. A few of these, they acknowledge, have not the same amount of evidence in their favour which the rest have. And what does this acknowledgment amount to? To no more than has been the case with other sciences—that all science is progressive—that no science becomes perfect at once—much has yet to be discovered in physiological, pathological, and kindred sciences, although this by no means detracts from what has been discovered.

If, then, phrenologists are unscientific in what they allege they have discovered as functions of the brain, and that their system is not a convertible term with "cerebral physiology," it might be wise to stop

here, and ask Dr. Hunt to inform us what he considers to be the proper functions of the brain; because I consider the burden of proof lies with him, as he has attacked no tenet of phrenology except the one I have acknowledged him to be justified in exposing, but which, according to what phrenologists otherwise state that "the brain is not a single organ, but a congeries of organs," may be treated more as a grammatical than a scientific error.

It would have served Dr. Hunt's purpose better, and would have done greater justice to phrenology, if he had stated his objections in a more tangible form, as, with the exception I have noticed, he has attacked none of the doctrines of phrenology, and, until he has done this, phrenologists can offer no defence.

Let me, however, assure Dr. Hunt that the "modern phrenologists" who are known to me have as sincere a desire to investigate into all the laws of the nature of man as any anthropologist can have; but I do not consider it an unwise course to pursue the study of one department of his complex nature, in preference to spreading that study over so vast a field as the whole of it embraces.

THE DUNDEE ANTHROPOLOGICAL CONFERENCE.

We have to record an event, which, it is more than probable, will have an important bearing on the progress of the science of man.

Our readers will have been informed in previous numbers that some difficulties were anticipated by the anthropologists who were going to Scotland. Some residents at Dundee shared this opinion, and formed themselves into a committee for the reception of anthropologists. The official report of the proceedings of this committee having been given to the public in the report of Mr. C. W. Devis to the Anthropological Society, it is not necessary for us to dwell on these particulars. Suffice it to say, that all arrangements were made for the Association, but the programme came out, and there was no department for anthropology.

Under these circumstances a meeting of the Anthropologists and their friends in Dundee was held, and it was decided to hold a Conference forty-eight hours later.

It is not our object or duty to dilate on what was then done. We have only to record what took place at the Conference, and the result

of the same on the future prospects of Anthropologists in the British Association for the advantage of science. The following account of the speeches at the Conference is taken from the *Dundee Advertiser*, a newspaper which gave better reports of the meetings of the Association than any other paper has ever been known to do. By printing this from the public papers of the time, we shall be giving this address an historical nature. We may also add that this address was reprinted in the London *Daily News*, and also in most of the Scotch newspapers.

Between four and five hundred of members or associates of the British Association or members of the Conference attended the meeting, which was of the most enthusiastic character throughout.

THE PRESIDENT'S ADDRESS.

Dr. JAMES HUNT, on taking the chair, said—A few days ago I left the south of England, on a journey, and with a duty which caused me no little anxiety and a slight feeling of dread. For the last twelve-months I have been receiving letters from north of the Tweed telling me that the people of Scotland had made up their minds to declare war against the students of a branch of science in which I have long taken a deep interest. But not only have I received letters, but my attention has been directed to published articles, letters, and pamphlets, the perusal of which productions have produced mingled feelings of amazement and indignation. There may be other members of the British Association for the Advancement of Science who have also seen the publications to which I have alluded. By one person I was told that it was no use for Anthropologists to go to Dundee, for the people would not hear them. Another hinted that there were means to be employed which would remove any fears existing in Scotland against us. Of the amount of truth in this charge I know not, nor do I think it worth while to waste time in dwelling on this point. I think I shall be expressing a general feeling amongst the Anthropologists when I say that, however deeply and sincerely we regret the present position of our science in the Scientific Congress of Great Britain, we, at the same time, feel most sincerely that the non-formation of the Anthropological Department in the British Association was purely and solely based on an honest conviction of what they thought would most tend to the real advancement of science. I feel it my duty to make this statement at the outset, because I know that with many persons there exists a very strong feeling that we have been badly and unfairly treated. I know also that some have felt great regret, if not annoyance, by the exclusion of the Anthropological Department in the Association. Many declared to me that they would never have come to Dundee had they known what was to happen, while some of the local Association have also intimated similar opinions. I am sorry to perceive that there prevails a very general misconception respecting our exact relations with the British Association. To those persons who feel any annoyance with the Association, let me

entreat of them at once to relinquish such feelings. What has been decided on this occasion has been done with my own most entire sanction. I am both willing and anxious to have the entire responsibility of what has been decided. On Wednesday last it was in my power to have proposed a department for Anthropology in connection with the Biological Section. I fully and most carefully considered the matter, and did not feel it my duty under the circumstances to do so. At that time I felt that the papers I had brought up, and which I thought would have been passed by the Biological Committee, would not be sufficient to have supplied a department with sufficient papers. I felt, too, most strongly the real absurdity of having Ethnology in one place and Anthropology in another. I felt, too, a desire to go and hear my old friends and colleagues read their papers, and still more disinclined to do anything which could offend any members or associates of the Association. I felt justified in the course I then adopted, and deeply regret that some of my local friends, in their zeal for our cause, should have expressed themselves in language likely to give offence to the authorities of the Association. On the part of those gentlemen, I beg to say that the first feeling of annoyance and indignation has passed entirely away on the real facts being explained. By our present arrangements, we hope to be able to hear our friends and colleagues, the Ethnologists. I have only to regret that two of the papers read to Section E yesterday, by Mrs. Linton and Mr. John Crawford, I had the pleasure and satisfaction of hearing read at the Ethnological Society of London during its past session. Had the Biological Section allowed us thus to proceed, we could have kept up a department until the next meeting of the Association. Yesterday morning a meeting of strangers and residents in this town was held to consider what was best to be done for our science under the circumstances to which I have alluded. The situation was one of no small difficulty and delicacy. On the one hand, we had apparently—but only apparently—against us the most eminent scientific men of the age, to offend whom would be an act of both madness and ingratitude. On the other, we were told that the hostility of the people of Dundee against Anthropology was too great to allow students to speak out what they believe to be true. But great as we saw our difficulties and dangers, only one thing was wanted to bring us thus together. No sooner was it faintly hinted that we should desert our sinking ship than with one accord we felt the utter impossibility of such a step. Whatever offence we may have the misfortune to give either to the authorities of the Association or the people of Dundee, yet we all feel it better to receive the most virulent abuse rather than incur the contempt the desertion of our post would entail on us. Our first difficulty was to find one whom we could ask to take command of our apparently sinking cause. I suggested an appeal to some of the eminent men of science at present in Dundee, or to one of the distinguished and well-known residents of this town; but my friends all declared that it was my duty to them and to the cause of Anthropological Science generally, to rescue them from their embarrassing if not perilous position. I crave, therefore, the sympathy of the people of Scotland when I tell them that I now

occupy the position of President of the meeting merely to avert the contempt I should have received had I declined to obey the wishes of my colleagues and friends. To very many our cause appears, I believe, utterly hopeless, and they think that we should have shown more wisdom and more discretion had we gone back to our homes, and had we allowed the present opinions respecting the aim and method of Anthropological Science to be left to time to be corrected. If we had consulted our own ease and comfort, I have no doubt we should have followed this course. But there is one character which perhaps belongs peculiarly to Anthropologists—viz., the feeling of duty, combined with a nearly irresistible inclination to defend themselves when they believe they are unjustly attacked. But while it is the character of the Anthropologist to defend himself every now and then, he is at the same time a lover of peace, and would never enter into contentions unless really obliged. With regard to the British Association, let it be most distinctly understood that we have no charge or grievance to bring against that body. There are some men who, utterly ignorant of our real feeling and position, will not hesitate to declare that we are in search of a grievance, and that we desire to make ourselves martyrs, and the authorities of the Association our persecutors. Nothing, I feel sure, is further from our desire or from our intentions, than to complain of our present position. We have too much respect for our science, and too high an estimate of Dundee to appear in any such character. We all feel it, however unfortunate, that up to this time it has not been found convenient, or perhaps thought desirable, to have a separate Section or Department in which all the Students of the Science of Man could meet together and discuss subjects in which they are mutually interested. I have heard it hinted that we demand that such a Section or Department shall have the name Anthropology. This supposition is wholly erroneous. We merely express a hope that, in a great national body like the British Association, it may be found convenient at some early day to have a special Section devoted to the Science of Man and Mankind. In the meantime it has been thought desirable that an attempt should be made to bring a few students of the Science of Man together, by holding two or three meetings to discuss questions in which we all feel mutually interested. If I had thought such a course would be likely to produce dissensions amongst students of the same science, I for one would have taken no part in it. So fully am I convinced that the real progress of science is best advanced by a friendly, although entirely free, interchange of sentiments, that I should ever deeply regret that our present meeting should have this effect. Feeling, however, no fear on this point, I will proceed to touch on the aim and method of the Science of Mankind, now known in the greater part of Europe under the name of Anthropology. My brother Anthropologists will pardon me if I take this opportunity of merely explaining the aim and method of the Science. Before the conclusion of the sittings I trust to be enabled to lay before them a few remarks on a subject in which all modern Anthropologists are so intensely interested, viz., the Principles of Anthropological Classification. Nor do I think our time will

be entirely wasted if we once again consider, in an apparently hostile atmosphere, what are the objects we propose to ourselves by studying the past history and present physical and other characters of those beings called Men. Whether or no, however, Anthropologists may be agreed on the aim and method of their Science, it is equally certain that the great majority of the public generally, and perhaps of the British Association, do not yet fully understand either our aim or our methods. The past confusion of our Science in the meetings of the Association is purely the result of the want of some general agreement on this point. It is the knowledge that this is the real cause of our past and present difficulties which inspires me with the hope and expectation of bringing about a change which will be agreeable to all parties, and which, I contend, would do much to advance general science. Now, the aim of the Anthropologists is to build up a science under the title of Anthropology or some other denomination. The astronomer studies the motions and laws regulating the starry firmament; the geologist studies the laws regulating the formation of the crust of the earth; the botanist the laws regulating the formation and development of plants; the zoologist the laws regulating the formation and distribution of animals; and the Anthropologist studies the laws regulating the formation and distribution of mankind; and they each profess to do it by the same method. The Geologist unfolds the laws of the past by a study of the laws of the present; and the Botanist, Zoologist, and Anthropologist do the same. The science of Geology has for its object the discovery of the laws regulating the past history of the earth; the Botanist the past history of plants; the Zoologist the past history of animals; and the Anthropologist the past history of man. Anthropology, then, has for its aim both the present state and past history of mankind. In days not long passed, it was thought that the Geologist had no right to attempt to discover the past history of the earth, and even down to this very time there are, I believe, persons who think that it is not right scientifically to attempt to discover the past history of plants, animals, or mankind. Botanists and Zoologists, however, seem to be allowed to go on very quietly with their investigations; and why not allow Anthropologists to do the same? Their aim and their method are, or ought to be, identical. Two objections are, however, raised to these views from two opposite and mutually destructive grounds. One very large party say—as they formerly said of the study of the laws regulating the formation of the earth's crust—that the natural history of Man should not be studied, and for exactly the same reasons. But, if we consult the works of any modern writers who enjoy a deservedly high reputation amongst the public, like Professor Owen, we find it there clearly and distinctly asserted that Mankind is a proper object for study, description, and classification. The late Dr. Prichard, up to the year of his death, was urging a recognition of the science of Man by the Association. After a contention of many years, he succeeded in attaining a sub-section, or department, of the zoological department. The name introduced into the Association still remains, but let me ask any impartial member of the Association or of this Conference,

whether the natural history of man at present receives that attention and consideration which its importance and interest demand? The difference between the authorities of the Association and Anthropologists does not consist of diversity of opinion respecting the scientific study of man; the only difference is respecting the importance and position which shall be assigned to the Science. Anthropologists profess to make mankind a subject of scientific study—the British Association do the same. If, therefore, the natural history of mankind is not a suitable object of scientific study we are not to blame. The other party contend that Man is merely an animal, and that it is not necessary that he should be studied separately. The Anthropologist disagrees with both propositions, and occupies a moderate and entirely scientific position. If Anthropology is not less important than Geology, Zoology, or Botany, why should it have an inferior position? We consider that we are doing a real service to Science by endeavouring to remove the anomaly now existing in the Association respecting our Science. We hoped that what took place at Birmingham would have settled the matter: but no permanent settlement will, or can, take place until Ethnology and Anthropology be united in one department. On behalf of Anthropologists, we are much indebted for the defence made by the Rev. George Gilfillan. But, unfortunately, he defended them as though they had some theory to support. If they had a theory to support, they would have deserved all the hard things said of them, and would have had no claim to a place in the British Association or any other scientific body. There were as many theories respecting Anthropology as there were Anthropologists. Cardinal Wiseman was once asked if he thought it desirable that persons of the Roman Catholic faith should attend the Anthropological Society. He replied, "Yes, listen and say nothing, and when you are all agreed come and tell me." Anthropologists were not likely yet to be agreed on anything connected with their science. Theologians would do well to follow Dr. Wiseman's teaching. Science was by its nature progressive. The attempt to reconcile it at every stage of its existence was most absurd. It was said that the Scotch could not bear suspense. But suspense was the normal condition of all truly scientific men. The fact that there were eminent Scotch scientific men sufficiently refuted such a charge. Some had charged Anthropologists with having advocated the ape origin of man. But he hardly knew a single Anthropologist in England, or indeed on the Continent, who has not declared that the position of Man's place in Nature, as propounded by Professor Huxley, had been discussed too early. They had met together to discuss scientific questions, entirely irrespective of what might be the local feelings regarding them. There did not exist different opinions for London and Dundee. Two principles were found necessary by Anthropologists in London—to be obeyed in all papers and discussions. First, no theological or religious questions were allowed to be attacked or defended; and secondly, discussion was allowed as to the tendency of their Science. He should not attempt to disguise the real character of Anthropology. The introduction of Anthropology as a purely inductive Science was no doubt to some extent a revolution

in general Science. It had made its appearance in Europe when Metaphysics and Philosophy had become blended with Physiology—producing the bastard science known under the name of Phrenology. Their duty was to found a science of man on comparative Anatomy, comparative Physiology, and comparative Psychology, entirely free from all Metaphysical assumption. Besides this, to found the Science, it was necessary most minutely to study Man's past works. All branches of Science had to be compared before they could found a really lasting theory. They had no pet theories to support on any of these questions; no sensational papers to introduce. They were met together for work and for mutual instruction. Of all their facts and all their deductions, they invited the most rigid investigation and criticism. They craved for liberty to be allowed to discuss scientific questions simply and solely as such. Before the end of this meeting it would (he thought) be seen how grossly, yet no doubt unintentionally, their objects had been misrepresented. They had three objects in holding this Conference. First, that they might have a chance of meeting together; secondly, to remove the vast misconception existing in the public mind regarding this Science, and thirdly, to show that although disappointed they were not disheartened—and I think that what looks like misfortune may, by judicious conduct on our part, turn eventually to the benefit of our Science. Whatever might be the future of the Science of Man in the British Association, it should not be a failure for want of zeal on our part. We endeavour to give it that importance to which it is fully entitled. In conclusion (he said) I would invite those who will persist in attacking us, and endeavouring to raise a feeling of disgust against us, because of our adherence to Darwinism—to earnestly look at the real facts. If they will do so, they will find that if there be one society or one body of men who have more earnestly, more continually, persisted in attacking and endeavouring to refute the doctrines respecting man's origin by Mr. Darwin, or either of his disciples, that body is composed of men calling themselves Anthropologists. Nearly every objection of a scientific character which is to be found against the Darwinian theory of man's origin is to be found in the publications of the Anthropological Society. These statements I put forward as facts, and not as our justification, much less of anything of which we ought to boast. It so happens, however, that for nearly five years the publications of the London Society of Anthropology have teemed with objections to the Darwinian theory of the origin of man. From the first to the nineteenth number of the *Anthropological Review* just published, you will hardly examine a number without finding some objection to this theory. So great and so continued have been the objections we have continually raised against Darwinism, as now being taught in this country, that it has been our misfortune to have failed to gain the adherence of the great mass of Mr. Darwin's more immediate disciples. Professor Huxley for five years has been our most deadly, and sometimes even our most bitter, foe. He has on more than one occasion declared his hostility to us; while, on our part, our attacks on the views of Professor Huxley have been of the same deadly and

perhaps bitter character. Last year Professor Huxley came to Nottingham, but, I am well assured, out of no love to us, and much less with any fear; but, I believe, as a mere act of justice, he used his influence to improve the position of the Science of Man in the British Association. Our conduct looks like ingratitude, for we have never ceased to attack his views. A fact or an expression of opinion has only to appear against the Darwinian origin of man when it at once seems to find its way into the pages of the publications of the Anthropological Society. If the Society, as a body, have shown unanimity of sentiment on any one point, it has been, I believe, against the Darwinian theory of man's origin, as propounded by Professor Huxley, being warranted by the facts already known. For my own part, I have felt for some time that enough has now been said by us against the views of Mr. Darwin and his English disciples. Let it, however, be well understood that in attacking the views of Mr. Darwin and Professor Huxley we do not in any way relinquish that feeling of admiration and respect for their labours which every man who has the honour of his country at heart cannot fail to feel. Mr. Darwin is a man especially on whose labours no real student of Science can look without the most intense satisfaction and gratitude. His work on the *Origin of Species* is one of the most glorious and most praiseworthy publications of the nineteenth century; while Professor Huxley is a man who is one of the hopes, and, I trust, glories of British Science. He is a man who has shown that he will render justice to his direst foes. His conduct last year in our behalf gained for him the admiration and applause of not only every Anthropologist in this country, but of most of the leading scientific men of Europe. The simple act of justice on his part was thought by many to be an act of generosity. On the opinions of Professor Huxley we look as we ever did; but our admiration for the character of the man has, with one accord, all been greatly intensified from this generous and manly act. The present state of feeling with regard to Anthropology among scientific men, and also amongst the general public, arises, I believe, from an entirely mistaken notion respecting its aim and method. When it is once fully realised that it is purely a science of induction—when it becomes known that we have no theory to support, and only use hypothesis to be better able to classify our facts, and are ever ready to change our theories when the discovery of new facts warrants our doing so—then will the time come when we may hope that Anthropology shall receive that support from all classes of society which its importance demands. Let those once fearless champions of geological science and of other sciences but once fully realise our object and our method, they will at once come forward to extend the right hand of fellowship to us. Our great men of science, who direct the affairs of the Association, have not yet, I think, sufficiently examined into this matter. I trust that they may now be induced to do so. We in this country know too well the position which the science of Anthropology takes in France, Germany, and, indeed, wherever science exists, to allow ourselves to be daunted by difficulties or abuse. The students of the Science of Mankind in Great Britain feel, with their colleagues in other lands, that a general scientific body without the

Science of Anthropology, is like an arch without the keystone. We shall be content to wait in patience until this is seen and felt by others. In the meantime we intend to go on with our work. We neither court the applause nor fear the censure of any one. I hope and believe that not one sentence will be said here which can justly offend any one who favours us with his company. It is not our habit or custom to willingly do violence to the feelings of others. We commence our labours to-day, and I trust to the good feeling of the people of Dundee, and the good sense of those who take part in our proceedings, to make our meeting at Dundee memorable for the recognition it gives to the Science of Anthropology. I trust the people of Dundee will cease their attacks on our Science. Attack our facts or opinions as much as you feel inclined, but, for your own sakes, and for the credit of your country, do not longer attack the Science. We seek to discover from actual facts these laws regulating man's nature and development, not because such discoveries will lead to our material interests, but because we believe the discovery of these laws will form the basis of correct principles of human happiness; and, as these laws become fully established by scientific inquiry, misery and ignorance will have to give place to civilisation and enlightenment.

JOHN PLANT, Esq., F.G.S., F.A.S.L., proposed a vote of thanks to Dr. Hunt for his address. He said he had to ask the meeting to agree that the explanation by Dr. Hunt of the position and objects of the Anthropologists was satisfactory and worthy of acceptance by those present. Some might imagine that the Anthropologists desired to place themselves in opposition to the British Association, or to make themselves independent thereof; but such was not the case. They simply desired to assert the claims of Anthropology as an independent science. They merely wished that it might next year and thereafter be allowed its proper prominence in the programme of the British Association. He, for his own part, had heard a good deal before arriving at Dundee of the prejudice existing in the town against Anthropology, but he scouted the idea that any such narrow-minded views belonged to the inhabitants of so important a city. He thought rather that such prejudices had been imported by those accompanying the British Association from the south, than that they pertained to the banks of the Tay. He did not want to know the motives that have made the British Association jealous of anthropological science, but at all events he did not wish the papers he had prepared in connection therewith read in departments such as anatomy or zoology. He was sorry that there was a virulent discussion in the Dundee papers in connection with anthropology last year. He did not believe that newspaper discussion of scientific subjects led to much use. He had taken part in them himself, and felt all their bitterness and futility. The theories, foisted and fathered upon the anthropologists by enemies and quasi-friends, had disparaged their science in the estimation of some, but truth reverently followed up, and nature humbly and patiently investigated, would always have partisans. He did not fear for the future of anthropology if they only pursued their science by the method pointed out by Dr. Hunt.

Dr. GRIERSON said he had much pleasure in seconding the vote of thanks to Dr. Hunt. Last year at the British Association meeting at Nottingham he had on some points opposed Dr. Hunt. That gentleman had read from authorities in support of his views, and he had thought justified in quoting Biblical testimony in reply. Dr. Hunt had said he and his friends had never intended to make and never would make any attack on theology. All he would say, therefore, in conclusion, was that if there were no new attack there would be no defence. He trusted and fondly believed that anthropology and Christianity would be found to go hand in hand. At all events, if one word were said in Scotland against theology there were ten thousand Scottish tongues ready to defend it.

Dr. PAGE next addressed the meeting—If it were asked, he said, why a lame and disabled man like himself should be present on this occasion, he would answer at once, that he came there to raise his voice, feeble as that might be, in the cause of science, and to protest, at the same time, against the inconsistency of the Council of the British Association. He would not, indeed, have been present in Dundee had he not learned a few days before of the attempt to extinguish, in his opinion, one of the most important sections of the Association. He would not enter into the history of the long struggle which the anthropologists had had to establish their position in the Association, and which had already been adverted to by Dr. Hunt; but every one must be convinced of the glaring inconsistency of the British Association in having opened the door to them in 1866, and, without any reason assigned, closed it against them in 1867. What circumstances had occurred, he would ask, since 1866, either in the history of anthropology or in the conduct of its supporters, to have led to this result? This was a question to be answered by the Council, and in an Association professing to be for the advancement of science, the public would look for a distinct and unmistakable reply with no little interest. It was true they had been told the problems of anthropology could be discussed at the Biological, or the Geographical, and Ethnological Sections, and so far as man was a mere animal that might well be. But man was something more; he had, over and above his fellow-creatures, an intellectual, moral, and religious nature. He was a fabricator, not merely of mechanical tools, by which he became a modifier of nature, and, to some extent, a sub-creator; but he was also the inventor of intellectual tools—of political, social, moral, and religious schemes, by which he secured the elevation and advancement of his race—thus separating him immensely from the lower animals, and placing him in a category that could not be properly considered either in a Zoological or Ethnological Section. And what, after all, was it that anthropology sought after? Why, the natural history of man; and if they were free to investigate the nature of plants and animals without let or hindrance, much more were they entitled to do so in the case of man. Every man in the town had his individuality corporeally and mentally. They could not all become poets or painters, mathematicians or astronomers—and just as surely as men had their individuality, so had nations, and it was individual

character which was the highest aim and object of anthropology. So long as nations had this individuality, the same causes that were operative on one race would be totally ineffectual in another; and not till these peculiarities had been established could commerce, or missions, or education, have their first or legitimate effects. People talked of civilisation, of admixture and amalgamation of races, but there could never be amalgamations where nature had established wide racial distinctions, and all such attempts either ended in failure, or, what was worse, often in the debasement and degeneration of the higher race, which vainly sought such amalgamation. He need not point to South and North America as striking examples of this truth in opposite directions. Such, among many others, had he time to enumerate, were the uses of anthropology; and what, he would ask, therefore, was the cause of the odium which the science had on this occasion incurred? There was no use of blinking the matter. The Council were evidently pandering to popular prejudices, and striving with uneasy tenderness to get rid of a difficult subject. He had no wish to offend prejudices where he had little chance of establishing convictions; but if these prejudices stood in the way of truth then offended they must be. The anthropologist had his convictions and opinions like other men; but with this difference, that their opinions resolved themselves into creeds, while his only remained with him as beliefs. A creed subscribed to and bound to be defended as a thing final and irresistible, was one thing; a belief entertained according to present knowledge, but liable to be changed as newer knowledge was acquired, was a thing altogether different. It was this war of a creed and the search after further truth that lay at the bottom of the whole matter. It was the setting up of Oriental cosmogonies of four or five thousand years ago, against the newer knowledge which science was every day earnestly, anxiously, truthfully, and prayerfully endeavouring to reveal. It was the old question of reconciliation—the attempt to harmonise what could never be harmonised without committing treason against science and dishonour to religion. If there were to be reconciliation let their opponents attempt it; as for them, it was enough to labour after the truth, as revealed by the facts and phenomena of nature. And, finally, if there was anything irreverent or irreligious in the matter, that irreligion must rest with those who would thus vindictively endeavour to thwart the search after truth, and to repress the aspirations of the soul and intellect after a knowledge of the Creator, as revealed in his highest and noblest creation, Man, and in his relations to God, to his fellow-men, and to the beautiful world by which he was surrounded.

Dr. HUNT, in a few words, expressed his pleasure at the vote of thanks that had been accorded to him, which was the more enhanced from the circumstance that it had been seconded by, as he believed, his sincere and honest opponents of last year. Dr. Hunt then announced that the Section would hold its second meeting on Monday, at three o'clock, and in the same hall, when several papers of interest would be read and submitted to discussion—the tickets of the British Association giving admittance.

The opinions expressed by the local press, or by correspondents of newspapers on the spot, will perhaps better indicate the effect of this first and only meeting of the Conference than any remarks of our own.

The anthropologists, before this meeting, were denounced for "holding a theory"; now they were denounced in like manner because they had no theory. The following leader from the *Dundee Courier* appeared the day after the first meeting of the Conference. It runs as follows:—

"AN UNSCIENTIFIC SCIENCE.

"The anthropologists, denied the privilege of having a department to themselves by the Council of the British Association, have set up on their own account. They have taken the Union Hall, where they held a conference yesterday, and are to meet and read papers and discuss on the first three days of next week. Perhaps some of our readers—the non-scientific portion—may ask, What is anthropology, and why is it denied a sub-section by the British Association? The definition given by those who profess to know is that it is 'the science of man.' We are not quite sure that that will make the matter any clearer. It is only shifting one name for another. The explanation stands in need of being explained. We are doubtful if we shall quite succeed in an attempt to be explanatory, for the anthropologists themselves seem to be rather misty as to exactly what anthropology is. There is a sad lack of precision among them, and an utter want of agreement. According to Dr. Hunt, the president of the Anthropological Society, who yesterday delivered the inaugural address, there are in London about eight hundred members of the Society, and probably no two of them agree in their conclusions. They have no creed, and not even a theory. Dr. Hunt does not deem that a disadvantage. Indeed, he vaunts it as a merit. If anthropologists had a theory, anthropology would not, in his judgment, be worthy to be called a science at all. It is this absence of a theory which makes it scientific. The old meaning of the word science, which used to, and still does, among such scientific men as the Association permits to meet in sections, imply settled knowledge, is abandoned, and science, anthropologically considered, means an uncertain groping among facts, and either a Babel of conclusions or a chaos of inconclusiveness. The idea has novelty to recommend it, but we apprehend that is its sole recommendation. The anthropologists, however, do not do justice to themselves. Anthropology, if it is not yet, aspires to be, a science of the most ambitious order. It is to deal with man in all his relations, and consequently with all the things to which man is related. 'The Science of Man' is too modest a title. It is a science of the universe that is aimed at. Anthropology, to be complete, must be all the 'ologies' in one. The Anthropological Society, to answer its purpose, must absorb the British Association and all its sections. The undertaking is a gigantic one, and we only hope Dr. Hunt and his colleagues may prove equal to it. We may easily apprehend, then, why the Council of the Association refused a sub-section to anthropo-

logy ; but that perception only throws us across a difficulty. Why did the Council last year at Nottingham allow an anthropological sub-section to be formed ? If it was good for Nottingham, why is it bad for Dundee ? The answer, we presume, is, that there is a general opinion that religious feeling is not so strong in England as in Scotland, and the rulers of the Association had to arrange its sections with reference to its geographical position. We may at once appreciate the compliment paid to us Northerners, and perceive the fact that the savans owe any embarrassment they may have suffered to their own imprudence. There is an old tradition to which it might be worth the while of even philosophers to pay attention. It is, that evil spirits never come across our thresholds unless we invite them in. If an anthropological department had not been formed, we should not now have anthropologists in our midst with, if not a grievance, the appearance of one, and a grievance, too, that is very apt to awake popular sympathy—the grievance, to wit, that free discussion is being stifled. Next to the apparent un wisdom of giving anthropology, as Dr. Hunt describes it, a department, is the un wisdom of banishing it. If the latter step had not been taken, those who have gained the opportunity of making themselves conspicuous would probably have remained unheeded, if not unnoticed. As it is, it is not unlikely they will attract larger audiences than any of the sections. The affair may furnish us with another instance of mending a hole and making a bigger one. Even philosophers do not always avoid getting ‘out of the frying-pan into the fire.’ If we may accept Dr. Hunt’s statement, the un wisdom is even worse than we have pictured it. He says that if anthropologists uphold a theory, there are theories to which they are antagonistic. They do not believe that our ancestors were apes, and they are opposed to Darwin’s theory of the origin of species. If that be so, the anthropologists owe a debt of ingratitude to the friends who have defended them, for they have certainly by those friends been represented as holding, or at all events favouring, the doctrines Dr. Hunt disavowed. But then there is room for just a faint suspicion that the Council of the Association had some reason to doubt the prudence of introducing anthropology to a Scotch public, and that Dr. Hunt’s address has been written with just a tinge of a desire to suit the latitude and longitude of Dundee. The man of the greatest weight among the speakers was Mr. David Page of Edinburgh, who has some reputation as a geologist, and he plainly enough indicated his feeling that anthropology is opposed to the Mosaic account of creation. It may be that, as the anthropologists have some hundreds of theories among themselves, and no theory in common, Dr. Hunt gave expression to the real state of his feelings ; but as Mr. Page will probably take a prominent part in the proceedings, and as he is not inclined to suppress his antagonism to “certain cosmogonies,” the Council of the Association may have an opportunity of seeing how unwise they were at Nottingham, and how unwisely they have in Dundee endeavoured to escape the results of their un wisdom.”

On Monday afternoon the special correspondent of the *Edinburgh*

Daily Review writes as follows, and very similar accounts appeared in other papers :—

“I thought that I should have to-day to send you an account of another meeting of the Anthropological Conference, but I am relieved from that task. The Anthropological Conference has come to an end. Its first meeting was also its last. You are not, however, to imagine from that the anthropologists have been defeated. The fact is, they have won a victory, if not a decisive and complete one. They have secured such a compromise as is in effect a triumph. How that has happened I may, perhaps, profitably occupy some of your space in explaining ; for, if I am not mistaken, this passage in the history of the Association is not only significant of the present, but also foreshadows the future.

“The anthropologists, before the commencement of the proceedings at Dundee, were visited by apprehensions that anthropology was not to have the same favour accorded to it this year as it received last year at Nottingham, when the so-called science had a department to itself. They expected it was to be, if not snuffed out, crammed up into a corner and discouraged. I am inclined to think they were not without some grounds for their fears and suspicions. Men have to accommodate themselves to the circumstances which arise out of their geographical position, and these circumstances are mental and moral as well as physical. The tendency is expressed in the adage which bids those who go to Rome to do as Rome does. There are among the leaders of the British Association, as well as of all other associations, ‘politic’ men, and it is not unreasonable to infer that they thought anthropology would not be well received in Scotland. Perhaps that impression, if it was not originated, was strengthened by the fact that a Dundee newspaper had, in its correspondence respecting the Nottingham meeting, spoken of anthropology and anthropologists in anything but a flattering manner. So this year the anthropologists were not to have a department. Ethnology and geography were put together, and the anthropologists were to have their papers read in that section, or in the biological or geological section, according to the special character of the contributions. ‘Divide and conquer,’ is an old maxim of polity, and in this case it was modified to ‘Divide and make safe. What was deemed a dangerous element, instead of being concentrated in a body, would thus have been scattered, and would not have been so powerful or conspicuous as if united. But you know what often happens to ‘the best laid schemes of mice and men.’ So in this case the plan—if there were a plan, and I think there was one—failed. It did worse than fail. Not only was its purpose not attained, but, as its direct consequence, the anthropologists became far more conspicuous than they would have been if a section had been assigned to them. They gained the opportunity of making a noise and attracting notice, and I need hardly say that is worth something to a party which is anxious to make its way in the world, and has the boldness and dexterity necessary for seizing and using any opportunity that may be presented to it.

"The way in which the opportunity was used shows how very small a lance may produce a great effect. An invitation was sent to the anthropologists to visit Dundee. Probably not more than a score of persons knew of the step, and they, although they are respectable in their stations, are not men of mark, position, or influence. The invitation was accepted, a 'Reception Committee' was formed, the anthropologists arrived, and a cry was got up that free discussion was being smothered. There was an apparent pretext for that cry, though it seems to me only a pretext, for if there had been anything more the paper of Mr. Crawford on the Antiquity of Man, and that read to-day by Sir John Lubbock 'On the Origin of Civilisation and the Early Condition of Man,' would have been excluded. But for an effective cry a pretext is often sufficient, and having got that, the anthropologists were provided with a fulcrum. They took a hall, issued their programme, and held their preliminary meeting on Friday. To-day they were to have commenced their 'business.' Three o'clock was fixed for the hour of meeting—a skilful device. If the Conference had been held at eleven o'clock, when the sections open, the anthropologists, many of whom are members of the Association, would have had either to have left anthropology to itself, or have given up attendance at the sections, and the audiences might have been thin ones. But the Conference beginning when the sections closed, the anthropologists would be at liberty, and the public unoccupied. The result would, I believe, have been that the hall would have been filled, and that doctrines, which those who believe the Bible to be true cannot help regarding as false and pernicious, would have been placed before a large number of persons. The very fact that the subject is a dangerous one would have been an attraction. The idea that it was forbidden would have roused and stimulated curiosity. It is useless to attempt to conceal that here very considerable interest has been awakened. On Saturday, though there were so many excursion parties, the hall filled to hear Mr. Crawford on the Antiquity of Man; and to-day, when Sir John Lubbock read his paper, the room was so crowded that I had hard work to push my way into a place. The assemblage, too, was composed of the very *élite* of Dundee society, and the closest attention was paid to the paper. I do not wish you to infer from that that anthropological doctrines are gaining acceptance, but I do desire you to understand that great curiosity is being manifested about them, and that considerable attention is being paid to them. No one who observes what is going on here can come to any other conclusion. I would write otherwise if I could, for the doctrines are to me abominable, and they are as weakly supported as they are bad; but then, weakly as they are supported, there is no strong opposition to them. That would not have mattered so much if the topic had not been pushed into prominence by the circumstances I have mentioned; but as it is, there may be, especially among the young, a crop of evil results.

"The position the anthropologists had gained by securing the attention of the public to their Conference promised such present advantages, that there is room for some surprise at their giving it up; but I

presume they have looked forward to the future. At the end of last week negotiations appear to have commenced between them and the authorities of the Association, the result of which is that anthropology is to be recognised. The anthropologists, geographers, and ethnologists are to be combined in a section. Thus the anthropologists, with such a weak lever as the Reception Committee, have forced the hand of the British Association, which, for the future, will number among its scientific departments one devoted to a science which has no theory, the students of which are without unity of view, and which in any, or every one, of its aspects is antagonistic to the Mosaic account of creation."

On Tuesday, September 10th, the following leader appeared in the *Dundee Courier*, and will indicate the change of tone in which the action of the anthropologists was received by the local press. It is headed thus :—

"SKILL AND FORCE.

"The affairs of this world are decided at least as much, if not more, by skill than by force. That is true even of physical conflicts, but it is still more certain in its application to mental contests. It is on record that Lee, when he faced Grant in that last desperate struggle in Virginia, had at no time more than thirty thousand men to oppose to the hundred of thousands in his front. Dr. Hunt, the leader of the anthropologists, if we may estimate him after the world's fashion, by results, is a better strategist than General Lee. The anthropologists bear, perhaps, about the same proportion to the British Association as the handful of Confederates did to the multitudes of the Federals; but while Lee was defeated, Dr. Hunt has won. It must not be forgotten, however, that this anthropological tactician had an advantage which Lee did not enjoy. Grant never placed his army in a false position—the Association was committed to one. If the anthropologists had never been accorded a department, they would not have had that weapon which we call a grievance. But having been formed into a department at Nottingham, and not being recognised at Dundee, they were able to cry out that they had been 'suppressed,' and to demand the reason for the 'suppression.' The demand was a very inconvenient one. The department had been 'suppressed.' There could be no doubt about that. The proof was patent. So far as the arrangements of the Association were concerned, Anthropology had been, but was not. It might not have been difficult to say why it was not; but it might have been disadvantageous. If the reason is not to be sought in mere caprice, and that we do not believe, there was but another alternative. It was because the Association this year meets in Scotland, and the northern latitude was supposed to necessitate certain conditions, of which the 'suppression' (that, we think, was Mr. Page's expression) of anthropology was one. But it would never have done to have said that. So the Association when it was accused was practically defenceless, because its only defence was worse than a plea of guilty. They had committed themselves at Nottingham.

They could not justify the retracing of their steps at Dundee except by a mode of justification more damaging than silence.

"The anthropologists, then, had a vantage-ground from which to act; but they required something more. If it be allowable to employ, figuratively, a term which belongs to mechanics, we should say that the anthropologists wanted leverage. They could not act on the Association from within. If Dr. Hunt had proposed an Anthropological Section, he would not, as we understand him to say, have found a seconder for his motion. They had to act from without, and, like Archimedes, they needed a fulcrum. More fortunate than Archimedes, they found or made one. A Reception Committee was formed to invite the anthropologists to Dundee, to receive them when they came, and to co-operate with them while they stayed. It is that Reception Committee that especially impresses us with the truth of the saying which attributes great events to small causes. We are sure the members of that committee will agree with us in saying that they possess but small public influence—so little, indeed, that it would have been deemed absurd to suppose they could have turned the British Association from its course. But a small stone may throw a large train off the rails. With the grievance of 'suppression' for lever, and the Reception Committee for fulcrum, the anthropologists have shaken the Association, and we are informed authoritatively that negotiations are going on with the view of recognising anthropology and embodying it in a section. Mr. Walpole negotiated with the Reform League, and Hyde Park is available for public meetings; her Majesty's Ministers are assumed to have trembled before Mr. Beales, and so we have a Reform Bill. What wonder, then, if the Association has succumbed to Dr. Hunt and his friends, and anthropology is to have a place. Whatever may be the case with respect to anthropology, which Dr. Hunt informs us has none of the elements of a science, there is one art which has been brought almost to perfection—it is the art of agitation.

"It is impossible not to admire the politic moderation exhibited by the anthropologists. They had secured a position which in Dundee would have given them greater advantages than a part of a section would afford. What with their grievance, which had enabled them to make a noise, and the subtle attractions of a subject of doubtful propriety, they would probably have had larger audiences than any of the sections; but, like wise men, they sacrificed the present to the future. If they had not made peace, they would have had to make the same efforts every year, and while their lever of grievance would, as time went on, have become weaker, a fulcrum might not always have been available; but, by negotiating, they have made themselves a part of our great National Scientific Association, and gained a permanent stand-point from which to preach a science without a theory, to followers, no two of whom have views in common. It is seldom we have such an instance of how the mighty may be coerced by the comparatively weak, when the mighty begin by putting themselves in the wrong, and then struggle to evade the consequences without openly going back to the right."

We have no space to dwell further on the notices given of this meeting of the Dundee Anthropological Conference. Nor shall we here dilate on the future hopes of anthropologists in connection with the British Association. On one point, however, we do feel it our duty to express our opinion, viz., on the continuance of the meetings of such a conference. Our readers will remember that at Birmingham a letter was read from Professor Owen, in which he strongly advised that anthropologists should annually hold a Conference or Congress, and that such a recommendation was supported by so veteran a public scientific caterer as Sir Roderick Murchison. This year the Duke of Buccleuch has given it as his opinion that the number of such associations as the British Association ought to be increased. We cannot but think that the anthropologists in this country are very grateful for these hints. The time may not be far distant when such a Conference may be held. But let it not be supposed for an instant that anthropologists will ever give up the claim of having their natural place in a national scientific association. We are glad to know that on this point there is no difference of opinion amongst anthropologists, whatever may be the wishes of some of the elder members of the British Association.

ANTHROPOLOGY AT THE BRITISH ASSOCIATION.

ON an occasion when, for good or evil, anthropology, as a science, has not been encouraged by the British Association, it seems at first sight incorrect to head an article with the title so familiar to the readers of this *Review*. But it is quite impossible to exclude the science from the arena of section E, although nominally it has been "left out in the cold." Wherever the study of the science of man receives any support, there necessarily must anthropology be present, and the meeting at Dundee had its share of anthropological papers contributed by various gentlemen. It is only to be regretted that, with very few exceptions, none of these papers were new. All Mr. Crawford's papers had been long familiar to the scientific public. Perhaps it is good policy on the part of the writers of these papers to attempt a larger popularity for them than they might otherwise receive, but it is a poor compliment to the scientific parliament of Britain to set such long-preserved meats before its members as solid

fare. In the following report of the papers read, the previous use of them has been indicated.

Probably the most novel feature of Section E on the occasion was the opening address of Sir Samuel Baker, from which, as our space precludes the insertion of the whole, we shall offer a few extracts, contenting ourselves with a summary of the rest. After some preliminary remarks, in which Sir Samuel adverted to his own labours on behalf of scientific discovery, he proceeded to dilate upon the subject of geography, asserting that it was closely interwoven with theology; and that from the creation, to quote his exact words, "the very elements of our creed are connected with particular positions upon the earth's surface." Geography promoted Christianity, the speaker intimated, and after a survey of the early migrations of races, he says: "All this wonderful train of progression is based on geography;" "thus is religion linked with the study of the earth." We must confess that eloquence such as this tempts us to the inference that Sir Samuel had the fear of Dundee before his eyes; and the following passage leads us to think that perhaps the distinguished traveller was disposed to be slightly sarcastic upon theological ideas associated with districts north of the Tweed:—

"When we consider," he says, "that the Mosaical history accounts for 4004 years from the creation of the first man until the birth of Christ, and thus establishes the recorded existence of man for a period of 5,871 years to the present day, we must regard with the most intense interest the mysterious development of the world during that space of time."

This and similar utterances we cannot but suspect to be calculated for the latitude of Dundee, and hardly the serious opinions of the speaker, who cannot be supposed ignorant of the discoveries to which a better knowledge of chronology has conducted us. When a Bunsen, whose orthodoxy no one will question, has not hesitated to assign longer periods for the evolution of Egyptian civilisation, we cannot suppose a Baker ignorant of the fact, and therefore we feel somewhat smitten by the tone of irony here adopted. Sir Samuel then, in a masterly way, gave a brief review of the advancement of geographical knowledge, paying a graceful tribute to the patronage extended to that department of human energy by the venerable Sir Roderick Murchison; adding, however, with great sincerity, that "no striking geographical feat has been performed by England during the past year." This is unquestionably true; and it is somewhat remarkable that, at a time when Abyssinian geography is so great a want, we find scarcely a guide of any trustworthiness to aid our troops on the expedition to which they have been impelled by a series of blunders,

political and scientific, unexampled for their enormity. Sir Samuel differed from Sir Roderick Murchison respecting the fate of Livingstone, believing him to have met his death. In an eloquent peroration, the President, with great good taste, confining himself to geographical matters, bore testimony to the efforts made at home and abroad for an extension of our surface knowledge, prudently saying nothing on the subject of the science of man, which shares with the elementary topic of geography the attention of the frequenters of section E.

A vote of thanks to Sir Samuel Baker was proposed by Sir Roderick Murchison, who congratulated the section on "the progress geography had made from the beginning of time," and seconded by Mr. John Crawford, after which the section began its labours for the meeting of 1867.

A paper, by Lieutenant S. P. Oliver, R.A., on the "Communication between the Atlantic and the Pacific," was then read, in the course of which the following amusing cross-examination of that gentleman was conducted by Mr. Crawford in his happiest style :—

MR. CRAWFURD said that Lieutenant Oliver had, no doubt, had excellent opportunities of forming an opinion upon the comparison between the red men of America and the black men of Africa, as he had seen them in Madagascar. He would like to know which of these races Lieutenant Oliver preferred.

LIEUTENANT OLIVER : I think that is a very difficult question indeed.

MR. CRAWFURD : That is just the reason why I put it.

Lieutenant OLIVER was sorry he had given that subject very little of his attention ; but he might say that the men who were with him, and who were their best men when cutting through the forests, were men from Africa, who had been imported as slaves several hundred years ago to some island in the West Indies. They made themselves troublesome there, and were placed by some government, whether English or Spanish he did not know, on the coast of Mosquito. Ever since that they had followed the occupation of mahogany-cutters, and there were no better men in the world. The Indians there were a useless set ; they had, perhaps, never been developed. They followed hunting, shooting, and fishing, and all they cared for was to provide for their physical wants. During the dry season they laid up provisions for use during the wet season, and that seemed to be the utmost of their desires. The black men with whom he had been acquainted at Madagascar, were also widely different from the negroes he met with in Africa. The people with whom he had most to do in Madagascar were of the dominant race, and were of a superior class.

MR. CRAWFURD : You saw a great many monkeys and a great many savages. Did you encounter anything in the missing link between man and the monkeys ?

Lieutenant OLIVER : No, certainly not.

MR. CRAWFURD : I see you have been eating lizards and iguanas. What like is iguana flesh ?

Lieutenant OLIVER: Iguana flesh is like what I would imagine the flesh of a young child would be.

Mr. CRAWFURD: Did you like it?

Lieutenant OLIVER: Well, we were generally pretty hard up when we ate it.

Mr. CRAWFURD: You would not have eaten a young child, I suppose, in the same circumstances?

Lieutenant OLIVER: Well, I don't know.

A paper on the "Ethnography of the French Exhibition," by Mrs. Lynn Linton (previously read in London), was then read, but it contained nothing of special interest to anthropologists.

The following form some of the most important papers contributed to section E by various gentlemen, with the discussions thereon:—

The Antiquity of Man (previously read in London), by Mr. JOHN CRAWFURD, F.R.S.—The writer remarked, in opening, that the discovery of human remains contemporaneous with those of animals long extinct in caves, and in lake pile buildings, attested the great antiquity of man, and it was equally attested by the discovery of tools, weapons, and implements, unquestionably the work of his hands, in the "drift" or loose alluvial gravel.

Sir JOHN LUBBOCK agreed most entirely and cordially with Mr. Crawford in the main conclusions to which he had come, but there were one or two minor points on which he had a rather different opinion. First, he thought Mr. Crawford somewhat underrated the quantity of human remains which had been found under circumstances which implied their great antiquity. It was quite true, no, doubt, that in the drift beds, from which so many specimens of human workmanship had been obtained, no undeniable traces of human bones had yet occurred; but it must be remembered that many traces of human skeletons had been found, and that it was only on account of the extreme difficulty in every case of feeling quite certain that they belong to those beds in which they had occurred that archaeologists and others had not felt justified in putting them forward as indubitable traces of human remains. After a reference to some human remains found on the Continent, which had given rise to much discussion, Sir John proceeded to say that when they came to researches which had been carried on in caves, there were many cases on record of caves in which human bones had been found under circumstances which implied that they belonged to the same antiquity as the weapons which were found associated with them. They found as many remains of bones in such localities as they could expect to find; and he would even venture to go further than that, and to say that they found more than they might naturally have expected to find in caves which had also been used as the dwelling-places of man. Of course, it was natural that, under any circumstances, men were not buried in caves during the time these were occupied as places of habitation; but any difficulty they might have on that head was removed when they found that the Esquimaux, who lived under such

very similar conditions, and with animals identical with those that were living with our earliest predecessors in the west of Europe, paid very little attention to the remains of their dead, allowing them to lie about neglected in the neighbourhood of their dwellings, and also that there were many races of men who were actually in the habit of burying their dead in the houses which they occupied when alive, so that the tomb was not only figuratively, but was literally "the house of the dead." Among many races, such as the Esquimaux, when a man died his body was laid in the house which he had occupied, and it was shut up, and there were traces of the same thing in other parts of the world. It was, therefore, partly to be accounted for in this way that so many traces of human bones had been got in caves which had evidently been inhabited. Upon that point he could not help thinking that Mr. Crawford would find that he need not explain or apologise in any way for any supposed absence or rarity of human remains in those caves which had latterly been examined with so much care. Then, he thought Mr. Crawford had been rather unjust to the Feejeans. When they considered the canoes these people built, the arms and implements they formed, and even the language to which Mr. Crawford had alluded somewhat uncomplimentarily, he thought they would admit that the Feejeans were more advanced than he appeared to suppose. He would say the same thing of the Esquimaux. No doubt they were very dirty, but one could not wash himself with ice; and they must remember that they lived in a country where very often it was impossible to get enough water for drinking purposes, and therefore the people could not be expected to use much of it for washing themselves. Indeed, when the circumstances were considered, the Esquimaux would be found to have made the most of their opportunities; and he even thought that, if Mr. Crawford himself, with his well-known ingenuity and his great perseverance, were to go to live in the far north among that people, he would find it difficult to carry on a more civilised state of existence than that in which the Esquimaux were found to be. Sir John further remarked that he thought Mr. Crawford had been unjust to the ancient Britons also; and next, alluding to his reference to the Egyptian hieroglyphics, he remarked that the labours of Dr. Young in that department ought to have been noticed. The principal point, however, on which he differed from the author of the paper was that he (Mr. Crawford) was a total disbeliever in the unity of the human race, whereas he (Sir John) was a firm believer in that unity. In conclusion, he remarked that it has been said that there had been certain papers which had not been read on the present occasion, because the British Association was afraid or unwilling to excite anything like hostility among the people of Dundee. Now, he thought that this paper to which they had just listened was a very good answer to any remark of that kind. He was quite sure that very few people would suppose that the British Association would pay so bad a compliment to the inhabitants of this part of our island as to suppose that they would meet with a different reception here from that which they were accustomed to meet with elsewhere in discussing such questions, or that the natives of this part of the island

would wish the Association in any way to conceal those opinions which they honestly held, and which they had never hesitated to express elsewhere. Far be it from them to shrink in any way from fair discussion. They were most anxious, one and all, to hear everything that there was to be said on the other side; and it was a very bad compliment, either to the people of Dundee or to the members of the British Association, to suppose that these interesting and important questions could be discussed in any other spirit than that in which they had been ventilated in other parts of Great Britain. He was very glad, from that point of view, that his friend Mr. Crawford had brought forward this excellent paper; and he had not the least fear that the discussion which would take place upon it would be conducted in the true spirit of scientific inquiry.

Mr. CYRIL GRAHAM called attention to the fact that the chronology followed by Mr. Crawford was that of only one person. There were several other eminent Egyptologists who followed a different system, and there was great reason to believe that the Pyramids, which the writer of the paper spoke of as having been built so very long ago, had been built within a much more modern period.

Dr. JAMES HUNT said he thought, in the first place, that the section were much indebted to Sir John Lubbock for his concluding remarks with regard to an impression that had gone abroad about the British Association being afraid to hear papers of this nature. He so cordially agreed with Sir John's sentiments on the subject, that he took this opportunity to say most distinctly that he did not think the authorities of the British Association should at all have that charge brought against them with regard to papers of a really scientific character, for they were admitted—if there was room for them they were generally read. On that point he could very well say that, as long as six years ago, he himself had an opportunity of reading a paper on that subject at the Divinity Hall at Oxford, on the occasion of the meeting of the British Association, and he could say that there had been no exception taken to any really scientific paper on account of the opinions that had been therein advanced. At the time mentioned, Mr. Crawford was, he thought, one of those who did not agree in the opinions he then expressed on the subject, and he was very glad therefore to have that opportunity of saying that he had listened to that gentleman's paper with the greatest pleasure and satisfaction, and found very little in it indeed with which to disagree. In fact he was far more in accordance with it than Sir John Lubbock seemed to be. Mr. Crawford had alluded to the connection of evidence of the antiquity of man, and all now agreed that the results of every branch of the science of man came to the same result, therefore it was that his paper was valuable, and for that reason he thought Mr. Crawford had done good service in calling attention to it. There were some little difficulties in the paper which he should like Mr. Crawford to explain. First, there was that with regard to the innate incapacity of the Australians. Mr. Crawford went on to speak of the people who were once without speech and had only instinct—and he called these men. Well, it was rather a difficulty if they were once without speech, and with only instinct,

why he called such beings men. Mr. Crawford had said that the Australians had the innate incapacity to accept civilisation, and thus argued from that absolute original distinction. Now, he did not understand, but would be very glad if Mr. Crawford would tell them how he came to call these people "men without speech and only instinct," because he was a little at a loss himself to know how such creatures, having no speech, and having only instinct—how such creatures could be called men. Next, with regard to the other subject—that of Egypt. Bunsen was an advocate for the unity of man, and he said it was utterly impossible to explain it in fewer than twenty thousand years. That was the opinion of one who was a firm advocate for the unity of man, and he boldly proclaimed that it was impossible to get reason out of unreason. Now Mr. Crawford seemed to be able to do that—to get reason out of unreason—and yet declared that the Australians were incapable of improvement. Mr. Crawford had perhaps gone out of the field—possibly some of the facts he had brought forward had not a very strict bearing on the antiquity of man—but he had much pleasure in saying—though he often differed from Mr. Crawford—that he cordially agreed with him on this occasion.

Mr. CRAWFORD was much obliged to those who had listened to his paper, and greatly obliged to the two gentlemen who had made remarks on it for the courtesy they had shown. He begged in the first place to reply to the question raised by Sir John Lubbock. Sir John was of opinion that his information on geology was not very complete; but he had to say that most of it was taken from Sir John Lubbock's own works. As to the Feejeans, he looked upon them as a race very low indeed in the scale of civilization. Some of the races in the South Sea Islands were a more civilized and ingenious race—he meant the fair-haired race—but not so the Feejeans. A commission sent out by our Government to the Feejee Islands reported expressly that 500 of the fair-haired race would, in a war against the Feejeans, be able to turn the scale of success against 20,000 of them. These people were wholly uncivilised. They killed and banished their aged fathers. In fact, he was glad he was not a Feejean himself, or he would no doubt have been banished long ago. The fair-haired race were a most ingenious people; they continued to live in a country in which no other human beings could subsist, for when the red American Indian endeavoured to live in their country it was found that he could not exist among them. As to the unity of the human race, of course he did not believe in that. His friend believed in the theory of special selection, and he hoped to be able to hear Sir John describe his theory of the human species, to explain how he discovered the missing link, how a monkey became a man, and how all the different races of men had undergone the change they had now done. He would like to see a single particle of evidence to show that a black man became white, or a white man became black, or how a black woman could be compared to the women he saw before him. Mr. Graham stated that he had not agreed with certain Egyptologists. Now, he found that Egyptologists had not agreed among themselves, and he had taken the best authority he could, and he was satisfied that the chronology of Egypt was of

great antiquity. He did not quite understand what his friend Dr. Hunt had said about speech. He had made remarks upon the difference between speech and instinct——

Dr. HUNT—You stated that there were men without speech, and with only instinct, and I asked how you could class these creatures as men?

Mr. CRAWFURD replied that he had not stated any such thing, and Dr. Hunt had only misconceived what he did say. He said that there was capacity for speech, but they could not speak, because they had never learned. In the same they could not use gunpowder or steam engines, because they knew nothing about them.

Sir SAMUEL BAKER observed that he was very glad to see anthropologists and ethnologists on such good terms with one another. They reminded him of a distinction which an Arab chief once made. An anthropologist and an ethnologist were apparently one,—just the same,—with a little difference.

Skin, Hair, and Eyes as Tests of the Races of Men (previously read in London), by Mr. JOHN CRAWFURD.—He remarked that the skin, hair, and eyes, taken either separately or conjointly, formed but a very ambiguous test of the races of men, seeing that some of them are common to several races in all other respects widely different. The complexion or colour of the skin, so far as the integuments were concerned, was the most conspicuous distinction of race. It was white, of many shades in Europe, including the neighbouring portion of Western Asia. There was no evidence that a black or brown native race ever existed in Europe, or a native white race in any other part of the world. The eye, in a great measure, followed as to colour and complexion. With respect to position, the eye was more or less deep seated, or had more or less prominent properties, which did not appear to be characteristic of any particular races. In the European races, and those of Western and Central Asia, it was horizontal, while with the Chinese and races of Tartary it lay obliquely in its socket, the inner angle being depressed, while the outer was elevated. This character, however, belonged more or less to other races equally with the Chinese, so that it was not of much value in the discrimination of races. Some had fancied that colour in men depended on climate, or that a powerful sun made the complexion more or less black, while a weaker one left it to improve in fairness in proportion to its feebleness. This popular error arose out of the narrow experience of our ancestors. The author then went on to state that on the continent of Australia the native inhabitants are of the same unvarying black from Cape York in the 11th degree of latitude to Tasmania in about the 43rd degree. They had here, then, an exclusively black complexion, while in other parts of the world, with corresponding climates, they had fair, brown, yellow, and black complexions. Such incontestable facts as these disposed at once of the hypothesis of climate being the cause of colour in the human complexion. If, then, the variety of colour were not the effect of climate, from what cause was it derived? This was one of the inscrutable mysteries which they could not solve any more than the varieties of colour in the lower animals. In con-

clusion, he remarked that Nature had made colour a distinction of species in the lower animals, and it had done the same, although not less definitely, in the races of men, and in both cases men were equally ignorant of the grounds on which it has done so.

Mr. CRAWFURD then said he would be glad to hear any remarks on this paper, and first he would ask for the opinions of the founder of the Anthropological Society.

Dr. JAMES HUNT was most happy to accept the invitation to make a few remarks on this interesting paper on one of the greatest difficulties in the whole range of the science of man. Mr. Crawford had wound up his paper by saying that as yet science was unable to account for the distinction of colour. Well, they had been at that for the last half century; attempts had been made to correlate the different races or species of men with the particular physical condition by which they were surrounded. Still, up to the present there was very little advance or sound generalisations arrived at. Dr. Prichard had said that climate would account for it, and endeavoured to illustrate this, but before he concluded his labours had to acknowledge that we could not tell how the distinctions in mankind had been produced, and to content himself in putting forth speculations on how they might have arisen. There were not such differences between bare skulls that they could not be used as a basis of classification; and he held that of the colour of skin, eyes, and hair, the structure of the latter was the most important for this purpose. Mr. Crawford held that there were exceptions, and he pointed out these; and though he did not know that gentleman's present opinion with regard to the number of special creations of man, which he required to explain the present differences in mankind, he knew that four years ago Mr. Crawford believed forty to be necessary.

Mr. CRAWFURD: I have sixty now.

Dr. HUNT: I have not been in communication with Mr. Crawford much of late, but the addition of twenty new species in four years is, on the whole, a satisfactory rate of progress. I think this subject is one of the most important in the whole range of anthropology—I beg your pardon,—the science of man. Dr. Hunt then continued to explain that, of late years, attempts had been going on to make examinations in different counties and countries and prepare tables of the results, so that a general broad classification might be arrived at. The subject would be a matter of difficulty for many years. He had found as great difference amongst the colours of hair in Norway as there was in this country, and he hoped that by the investigations now going on they would be able to correlate the structure of most of the races of Europe. Mr. Crawford had admitted, as all must, that science was not yet in a state to show the cause of physical, mental, and moral differences in mankind; and he had said, too, that they could give no reason for such differences. In the latter he was, perhaps, going rather too far, as he (Dr. Hunt) held that man's progress in the scale of civilisation, accompanied with other things, bore a relation to both skin and hair. A dark skin, accompanied with crisp hair, was invariably a mark of mental inferiority; but he held that none of the characters on which

Mr. Crawford dwelt could be relied on alone as a basis of classification. They only become valuable when combined with other characters.

Mr. CRAWFURD said there seemed to be no very material difference between the President of the Ethnological Society and the President or Director of the Anthropological Society, and he was sure they would be all very glad that such was the case. With respect to colour, Dr. Hunt assigned inferiority to dark skin. He (Mr. Crawford) would deny that. Napoleon had dark hair, and a dark skin too; and he did not conceive that a better specimen, so far as the mere humanity was concerned, had ever been produced. Of course, he meant the first Napoleon. The third Napoleon was not a very genuine Italian or Corsican; there was something Teutonic about him, too, he was told. Now, with respect to the inferiority of the black people, although the Hindoos were black they were incomparably superior and in a far more advanced state of civilisation than the brown-complexioned Malays. He would advise the Dr. to give up the black inferiority altogether, for he had nothing whatever to stand upon. With respect to the races being distinguished by hair or complexion, differences were to be found in the same family in the prosperous town of Dundee, by the same father and the same mother. Suppose a family of seven daughters. There might be cases of the kind, and he hoped there were. One had dark hair and a dark complexion; another was fair-haired; and a third was reddish, or, to be more genteel, auburn. There was not the slightest superiority in the dark-haired and dark-complexioned daughter as compared with the lighter-haired and clear-skinned members of the family. There were cases of every sort of hair and every sort of complexion being found in families by the same father and the same mother. How could they make out that?

Dr. HUNT said perhaps Mr. Crawford would point out where a race was to be found of equal intellectual power to the fairer races when dark colour was combined with crisp hair?

Mr. CRAWFURD replied that he knew of the dark colour being combined with wool, and he had known some very pretty people have curly hair. Dr. Hunt said he would not condemn every one. That was very well put on his part, for in Dundee they could find beauty and talent in every department of colour.

Dr. HUNT, in reference to Mr. Crawford's remark in respect to wool, explained that he did not make use of the word wool, because wool was not hair.

Mr. CRAWFURD remarked that hair was not wool, and wool was not hair, but they were pretty nearly the same thing. There could be no distinction drawn between wool and hair, except what was obvious to the eye. They could make the same use of the one as of the other, though he would be sorry to see wool upon a pretty young lady.

Dr. HUNT replied that a dark colour of hair and eyes, combined with curly hair, was always a mark of mental inferiority, and he challenged Mr. Crawford or any one else to bring forward an exception to this generalisation.

The discussion then terminated.

The Supposed Aborigines of India, as distinguished from its Civilized Inhabitants, by Mr. CRAWFORD. (Previously read in London.)—In many parts of India there existed rude and even savage tribes, differing widely in manners, customs, religion, and not unfrequently even in language, from the great body of the civilised inhabitants. People in that state of society were found only in hilly or mountainous districts, more or less inaccessible to conquest, and by their comparative sterility holding out little temptation to conquest and occupation. They were never seen in the fertile and well-watered alluvial valleys of the great rivers, which, on the contrary, were inhabited by civilised nations, however differing among themselves in manners and language. Linguists and craniologists had invented a theory to account for this state of things, which supposed the rude mountaineers to be the sole aborigines of India, while it imagined the civilised inhabitants to be intrusive strangers, who in a remote antiquity invaded India, conquered it, and settled in it under the imposed names of Aryans for Northern, and Turanians for Southern India. This view appeared to him utterly groundless, and he went into a lengthy description of the history of the people, their manners and mode of life, and quoted several accounts of the several tribes, in order to refute the view which he had mentioned. After an elaborate paper he concluded :—The mind may safely carry us back to a time in which the social state of India was similar to that of America, when the civilised tribes were few in number, and the wild or savage formed the majority. The Hindu is, beyond all question, a far more highly endowed race of man than the Red man of America ; and civilisation would probably spring up earlier, at more points, and attain a higher maturity in India than it did in America. We may even point at the localities in which civilisation is most likely to have had its earliest seats. Separate and independent civilisations would probably spring up in the plains watered by the “ Five Rivers,” in the upper valleys of the Jumna and Ganges, in the central and in the lower valley of the Ganges, and in the valleys of the rivers of Southern India, such as that of the Nerbudda, the Godavery, the Kistna, the Cavery, and the Taptee. These nascent civilisations would be independent of each other, and for a longtime be as unknown to each other as were the Mexican and Peruvian. All this most probably happened long before there was an Aryan invasion, or a religion of Bramah. The state of India at such a time would be a parallel to that of America on its discovery ; the wild and savage tribes would be numerous, and the civilised few in number. Proportionate to its extent, it would have as many small tribes, speaking as many distinct languages as America itself. India has still a score of nations, with written languages, but the number of its wild tribes has not yet been counted.

General COTTON remarked that each of the races referred to was deserving a separate study. Some of them were so like each other that the inexperienced would naturally suppose them to be one of the same tribe, but so great was the distinction that the one was in actual terror of the other.

The Origines of the Norsemen.—Mr. H. H. HOWORTH, F.A.S.L., F.E.S., read a paper on “The Origines of the Norsemen.” He said that in a paper which he read before, he endeavoured to show how differently the ancient features of Scandinavia must be viewed in order that its influence in the distribution of the ancient inhabitants of Europe might be appreciated. He then proceeded to examine and analyse in detail some of the problems with which it was connected. The reasons for the sudden energy of the Norsemen in the eighth and ninth centuries were to be found in the commotions that were taking place at those dates. The Mahometans were then in the full swing of their conquering spirit. The Georgian and Armenian annals were full of accounts of their sweeping in among the mountains of the Caucasus, and of the new life which their arrival aroused there. The inexplicable intricacies of the Eddic faith may perhaps receive some light from an examination of the effects of a Mahomedan infusion into the strange religion of the Parthians. Not that of Zoroaster—the religion of its higher society—but what we find reflected on its engraved gems and sculptured stones. It was this alone which could explain the very extraordinary fact that wherever Scandinavian relics were found in Ireland, Orkney, Deumark, or Sweden,—there were also found heaps of the coins of the Caliphate—not many from Byzantium, few from the Latin kingdoms of the west, but absolutely thousands from the other sources. Some might be seen by those curious in such matters in Edinburgh, which were discovered along with some silver remains.

The Character of the Negro.—Mr. C. W. DEVIS read portions of a paper, prepared by Dr. JOHN DAVY, “On the Character of the Negro chiefly in relation to Industrial Habits” :—

In this paper the chief object of its author was the vindication of the negro, who, he believes, has been unjustly considered a sluggard and inveterately idle. The argument used is of two kinds—one is founded on the organisation of the African, insufficiently fitted for work—indeed the very cause, under a mistaken humanity, of his first importation into the West Indies, with the vain hope of preserving the feeble and cruelly worked natives; the other resting on experience—a very extensive experience—finding that, with equal motives to be industrious, the negro is not inferior to the white man in industry. The author adduces instances of conduct on the part of negro labourers that would be highly creditable to Europeans in the same condition of life. He concludes with the expression of belief that such peculiarities as belong to the negro—as colour of skin, quality of hair, &c.—are of a kind suitable to him in his native climate, and beneficial under a tropical sun and in a malarious atmosphere, and not of a nature to allow of his being considered either as a distinct or inferior variety of the great human family; and further, that he is as capable as the white man, under continued education, in favourable circumstances, and freed from the curse of slavery, of becoming civilised, and of making progress in the liberal arts and sciences. One fact is dwelt on as of a very promising kind—viz., that these tribes, in the far interior mountainous regions of Africa, where slavery has least prevailed, and where the climate and soil are good, are most advanced—probably as

much so in civilisation and the useful arts—such as the working of iron, &c., as were the ancient Britons about the time of the first Roman invasion.

Mr. CRAWFURD remarked, that with reference to the Barbadoes, the condition of the negro was very peculiar. They contained a dense population, and if the negro did not work he must perish, and if the whole of the West India Islands, Jamaica included, were like them, the negroes would be peaceable and laborious. He was sure they would be glad to have this opportunity of returning thanks to Dr. Davy for his admirable paper, the whole of which he was sorry had not been read.

Dr. HUNT thought it was somewhat unfortunate that when an important paper was brought before the section they had not time to hear it read, and he considered Dr. Davy had a just cause of complaint against the manner in which his paper had been curtailed. So far as he had been able to gather from the portions of the paper which had been read, he was fully persuaded that it was one of the most important that could be presented to any scientific body. It was one of those questions which were now being tested in the Southern States of America. Of course, there was only one desire among scientific men—to know the truth. In the Southern States of America the disposition of the negro for labour was being tried. It had been contended by Dr. Nott, a distinguished anthropologist of that country, that from his study for twenty years of the negro character, there was a natural disinclination to field or agricultural labour. Whether that was so or not, he should have been very glad to hear Dr. Davy's paper read, as he had no doubt it would have thrown some light upon the subject. He had heard the other day from a gentleman who had just come from the Southern States of America—a medical man—that the frightful amount of destitution now existing in that country was something that no one could picture. The amount of disease, the amount of destitution was something very great indeed. Up to this time the blacks had not taken to labour. At present it appeared that the negro as now existing in the Southern States of America, was incapable of understanding and practising the present European code of morals—which made a distinction between the *meum* and *tuum*. He had asked this gentleman why they were not prosecuted, and he replied that if they attempted to do so they would have to build jails for three millions of people. These were very important facts, inasmuch as they were opposed to Dr. Davy's experiences. The question was, what was really the actual state of the case? In regard to Dr. Davy's remarks that some persons contended that the negro was little above the brute, he had to say that amongst his acquaintances there were not many holding that view. What he said was, that intellectually and morally he was inferior. In reference to the theory respecting field labour, there was a small section who believed this, and he had never understood why such should be the case. Why should there be this natural disinclination to work in the negro character? So far as the muscular system was developed, so far as regarded strength of body, so far as respected the power of resisting the heat of the sun—looking

at all their physical conditions—the negro appeared to be a species which was perhaps best adapted for labour, and why he should not be able or willing to work was a mystery. He hoped and trusted with Dr. Davy that the time would come when it would be found possible to discover what had hitherto been the objection of the negro to continuous labour. He did not think, when they called the negro inferior, that it was, as Dr. Davy said, a stigma. On the contrary, he held it was nothing of the sort. It was not a stigma upon the negro race to say that that race was mentally and morally inferior. It was not a stigma to any man to say that he was intellectually inferior to some other person. It was either a true or erroneous opinion that the negro was inferior. He was surprised to hear Dr. Davy speak of the innate goodness of the negro character, or even of the innate character of the Dundonians. Whatever might be his opinion of the negroes, he would not go so far as to say that they possessed innate goodness. Dr. Davy said it was the opinion of many persons. He differed with these other persons as he differed with Dr. Davy, for he did not think there was that innate goodness either in the negro or the Tasmanian—although the latter for a different reason, as they had now all died out.

Mr. WILLIAM BREWIN, Cirencester, said that he went out to Jamaica as one of a deputation from the Society of Friends. After arriving in the island, they travelled through the whole of it, and visited twenty-one out of the twenty-three parishes. They had intercourse with magistrates, planters, and people throughout the whole island. With respect to the black man, he wished his audience clearly to understand that it was the same with him as it was with most men; for he could speak of the brown man in the east, and he had seen a little of the red man in North America, and he could assure them that a black man was as willing to work, if he was paid for it, as any coloured man on the face of the earth. They would remember that thirty years ago the British nation paid twenty millions for emancipation. If that had gone to the right development of a colonial system in that island, we should have had a far better state of things than we have. Jamaica is what is called an unfortunate island. It has been going down for the past half century, and he said the great reason of this was that properties in Jamaica were not managed by the proprietors. They were worked by a system of attorneys and agencies, which was not only a very expensive, but also a very unsuccessful system. For everybody knew that an estate was best conducted by those who had the greatest interest in it. He believed the attorneys did their best, but they worked the estates in a very unsatisfactory system; perhaps paying ten to twenty-five per cent. for the capital employed. How was it possible for such estates to be successful? He said that if he were to turn planter to-morrow he could get as many labourers as he wished to employ, for the simple reason that he would pay them for their work. But what took place after the emancipation? The planters generally, instead of doing their best to induce the black people to labour on their estate, by paying them a fair day's labour, valued their labour at one-third of the price when they were slaves. When in a state of bondage, their masters lent them out at half-a-crown a day;

but now that they were free, they only received eightpence for their day's labour. The negroes would not submit to this, and the consequence was that their houses were pulled down, and they had to fly for their lives. The white men then introduced the system of importing labourers, or coolies, as they were called, from the other side of the world. In this way they raised a debt in Jamaica of something towards half-a-million by this immigration scheme, and the total debt of the island was £900,000, and he believed that one-half of this was caused by this immigration scheme of bringing labourers from the other side of the world into Jamaica.

Mr. C. W. DEVIS remarked that it appeared to him that Dr. Davy had mistaken the negro for some one else. It was the infusion of white blood that made the negro capable of doing what he could. Dr. Davy had said the negro was subject to the same diseases as themselves; and had quoted that splendid passage of the poet by way of helping him out of his difficulty. But what was the fact? why, that the negro was subject to entirely different diseases from Europeans. There were, it is true, some diseases they had in common. He might instance the yellow fever as a disease to which Europeans were subject and negroes exempt. Any one of those who had the slightest infusion of white blood in his veins was subject to it, and it might be said that the fever acted upon his constitution almost in proportion to the quantity of white blood in his veins. There was no better ascertained fact than that the negro character was sluggish. If he were taken into another climate, he would work spasmodically, but although he might not retrograde, he would certainly not progress.

Mr. KINLOCH, of Kinloch, wished to say before they proceeded further that the discussion had turned in a manner he did not expect. They had heard a great deal of the possibility of teaching the negro habits of industry, but he had come there to learn where they had shown the capacity of advancing step by step along with the white races in civilisation. They had not heard a single instance. Dr. Davy had not told them of a single instance. Dr. Davy had told them that there were men of intellect among the negroes; that there were men capable of being instructed and advanced in science; but he had not instanced a single case of a pure-blooded negro having made any discovery or done anything in the way of advancing civilisation and science. He humbly thought it would be much more satisfactory if, in speaking of the negro race, they would show the capacity that existed in their nature of improving and advancing in civilisation in the world along with the white race. He was sorry to say he had not heard one word about that. He did not dispute that the negro would work if paid well. The first observation that was made by Dr. Davy was that the cries of the infants of both black and white were the same. This, in his opinion, was absurd in the extreme. There were many animals which had the same cry. Indeed, he did not think the observation was at all in point. What they wanted was evidence, if it did exist in the negro, that he was capable of making discoveries in science, in knowledge, like Sir Humphrey Davy, their friend Murchison, and others, doing good to civilisation, and advancing the cause of knowledge.

Dr. DAVY was ready to show this. He read the following extract from his paper :—Professor Tiedeman, I need hardly remind you, has given many instances of negroes who had made a certain progress in the liberal arts and sciences, and distinguished themselves as clergymen, philosophers, mathematicians, philologists, historians, advocates, medical men, poets, and musicians, and that many also have earned reputation by their talents in military tactics and politics.

Dr. HUNT said Abbé Gregoire had published a work, in which he gave the history of fifteen negro philosophers. When it came to be investigated, every one of these fifteen were found to have white blood in their veins.

Dr. O'CALLAGHAN stated the experience of a gentleman who had a large knowledge of the negro, and who gave it as his opinion that the negro was not incapable of farther intellectual development after he attained adult education, but had told him that in the regiments into which they enlisted they were taught to read and write, and even to correct the accounts of the paymaster.

Mr. CRAWFURD said they had known the negro for four hundred years, but they were not aware that he had made any material progress during that time, while other European and Asiatic races had progressed. This was rather against the negro. With regard to the increase of population, the results were not nearly in proportion to those of white races. He concluded by stating that there was no doubt a great deal of distress and destitution in the States, and he thought when the negroes were emancipated an equivalent should have been given to their masters. He was sure the Section would willingly give their thanks to Dr. Davy for his able paper.

We have already given Sir John Lubbock's paper and the discussion thereon in another place. In all these cases we have closely followed the reports in the *Dundee Advertiser*. We have thought it better to do this than to request the authors to make their own emendations.

Mr. CRAWFURD read to the Section a lecture on the "Races of Man," which we believe was originally delivered before the Sunday Evenings for the People, held last year in St. Martin's Hall. On this general hash up of nearly every conceivable subject, Mr. H. VIVIAN of Torquay delivered a very fluent discourse on what may be styled the "Interpretation of the First Chapter of Genesis," and Mr. A. R. WALLACE again favoured the public with an interesting speech in favour of Darwinism. Mr. Wallace, however, confined his arguments chiefly to his favourite illustration, pigeons, and has not given us any new fact or put any old fact in a new light. The speech of Mr. Crawford on this paper we deem rather too comic even for our pages.

PROCEEDINGS OF THE PARIS ANTHROPOLOGICAL SOCIETY.*

THE Paris Anthropological Society held on the 8th of June an extraordinary meeting, which was followed by a banquet, in the Salon de Lemardelay, when a pleasing incident occurred. At the dessert the Secretary received the following telegraphic message:—

“Francfort-sur-le-Mein, June 8, 1865.

“Salut à la Société d'Anthropologie de Paris. Les fondateurs réunis des Archives Allemandes d'Anthropologie.

“De Baer, Desor, Ecker, His, Lindenschmit, Lucae, Rüttimeyer, Schaaffhausen, Vogt, Welcker, Vieweg.

The news of the foundation of a new periodical devoted to Anthropology was received with great applause. An immediate reply by telegraph was sent to the following effect:—

“Les anthropologistes français, à table, aux anthropologistes allemands, merci, salut et fraternité.”

Report on the prize Ernest Godard, of the value of 500 francs, awarded to Dr. Gillebert d'Hercourt, of Monaco, read by M. Simonot.

Our colleague Ernest Godard, (commenced M. Simonot) died on September 21, 1862, at Jaffa, exhausted by the fatigues of a long and toilsome voyage which he had undertaken in the interest of science. On his death-bed he did not forget the Anthropological Society, of which he was one of the founders.

“I bequeath,” he says in his will, “to the Anthropological Society the sum of 5,000 francs, the interest of which is to constitute a prize, to be awarded every second year to the author of the best memoir on any subject relating to anthropology.”

This is the first time that an opportunity is afforded to us to act in conformity to his bequest. Six Memoirs have been sent in competing for the *Prix Godard*, bearing the following titles:—

No. 1. On the importance of the black race, and its part in humanity.

No. 2. A printed Memoir by Dr. Joulin, entitled, *Anatomie et physiologie comparée du bassin, etc.*, extracted from the Archives Générales de Médecine.

No. 3. A printed Memoir by M. E. Koeberlé, entitled, *Essai sur le Crétinisme*.

No. 4. A manuscript Memoir by M. Gillebert d'Hercourt, entitled,

* Continued from vol. v, p. 364.

Mensurations opérés sur 76 indigènes de l'Afrique française et sur 2 Chinois.

No. 5. A printed Memoir by Dr. Morel, entitled, *De la formation du type dans les variétés dégénérées, ou nouveaux éléments d'Anthropologie morbide pour faire suite à la théorie des dégénérescences dans l'espèce humaine.*

No. 6. A manuscript Memoir, written in English, entitled, *Comparative Psychology*, sent by Mr. Charles Wake.

M. Simonot then proceeded to read an analysis of each essay sent in for competition, commencing with the essay on Cretinism, by M. Koeberle.

According to M. Koeberle, the primary cause of Cretinism is a diffusible agent, the existence of which coincides with the geological formations of certain localities and the mineral constituents of the water, and is in some respects analogous to the miasmata producing intermittent and typhoid fevers. Dr. Morel, in his treatise on degenerations, has already said that Cretinism is caused by the special action of a poisonous principle on the cerebro-spinal system, which miasma is somehow connected with the soil where magnesian limestone abounds, though it cannot absolutely be affirmed that Cretinism may not be met with in other geological formations. M. Koeberle looks upon goitre and Cretinism as two distinct morbid conditions, since, in a great number of localities, goitre is, and has been for a long time, prevalent, without the co-existence of Cretinism, which, in his opinion, is developed by the influence of an air vitiated by a miasma *sui generis*, whilst the excessive use of certain waters gives rise to goitre. Cretinism seems at present to be unknown in North America, Australia, Africa, Oceania, where, nevertheless, goitre has been observed. M. Koeberle is, therefore, of opinion that Cretinism is not an affection special to any race.

On the formation of type in degenerated varieties, by M. Morel.—This essay is merely a sequel to Dr. Morel's work on physical, intellectual, and moral degeneration; being, so to speak, a personification of the ideas expressed in his larger treatise. Given a morbid principle inherent in the constitution of the progenitors, this principle, if nothing opposes its transmission, becomes in the descendants the commencement of a series of successive pathological phenomena, inducing the progressive decay of a family, or may be of a whole race. The degenerated being is thus a morbid individuality in which are accumulated all the elements which have altered the constitution of a series of ancestors, by disturbing the evolution of their faculties and vitiated their instincts. But apart from the general characters belonging to all degenerated individuals of the same species, there exist parate characters belonging to individuals of different varieties.

Such being M. Morel's starting point, his object is to establish, from the physiognomy, the external and internal forms of the degenerated, the nature of these particular characters, to trace the morbid hereditariness to which they must be attributed, in short, to study the hereditary transmissions which have produced the formation of a type in degenerated varieties and their laws. For the better illustration of his principles, M. Morel added to his treatise three plates representing three sisters, the daughters of parents of a neuropathic condition, and a fourth plate representing two sisters, the daughters of parents given to alcoholic excesses and etiolated by want of proper nourishment.

On the importance of the black race, and its rôle in humanity.—The author, says M. Simonot, puts aside the interminable question of the origin of the human races, but, taking the Negro as he finds him, maintains that the black race is as indispensable to the general harmony as the white race. Of all the differences subsisting between the races of men, that of the colour of the skin appeared to him the most important, so that he would feel disposed to adopt it as the base of a classification, without, however, excluding the other characters, such as prognathism, woolly hair, etc. This dichotomy of the human species in two fundamental types—the pure white and the pure black, the other colours being only intermediate gradations—appeared to him the more acceptable, inasmuch as these two types inhabit perfectly distinct regions of the globe. He considers that a race which can only live in certain regions, to the exclusion of other races, is for these regions the superior race, owing this superiority precisely to the conditions which elsewhere would cause its inferiority. Where a race can only maintain itself by excessive precautions, they have only a factitious existence, resembling hot-house plants. This is demonstrated by the success attending colonisations of the whites in temperate zones, and their failure in inter-tropical regions. In the Havanas, Martinique, Vera-Cruz, Bahia, etc., the white race can only maintain itself on condition of following sedentary, commercial, or industrial pursuits, and still they require reinforcements from the mother countries. As to the cultivation of the soil, it has always been the appanage of the Negro, whether native or imported, an aptitude which is not attained either by the red or yellow populations, which this author considers as derived from the white type. Now, as the abolition of the slave trade precludes the white man from exacting forced labour from the Negro race, the best means to be adopted are to civilise the Negro, and to make him participate in its benefits. This treatise, observed M. Simonot, is written in a very elegant and lucid style, and denotes in the author firm convictions and generous aspirations. No doubt some of the theories contained in this memoir may appear very questionable,

such, for instance, as the predilection of the author for the colourisation of the skin as a basis for classification, or his idea of the derivation of the red and yellow races from the white type, or, finally, his idea that the cross-breeds of the Negro and the white are the predestined inhabitants of localities intermediate between hot and temperate regions. To discuss them would have led too far; he, therefore, confined himself to merely indicating these questions.

Comparative Psychology. By M. C. S. Wake.—In this treatise, the author endeavours to demonstrate, what no one contests, that in the series of animals their superiority results from more perfect development of the nervous system. The author gives a minute analysis of the intellectual acts of man compared with those of animals, in order to establish the superiority of man. We are unable, concluded M. Simonot, to give an analysis of this psychological dissertation without entering into details. But whatever may be the interest attached to works of this nature, they do not appear to us to give a great impulse to the study of anthropology.

Measurements and observations made on seventy-six natives of French Africa. By M. Gillebert d'Hercourt.—It is not without embarrassment, said M. Simonot, that we approach the examination of this memoir. It is not our task to follow the author in his developments and to appreciate the logic of his deductions. We have before us a collection of figures, imposing in their number, the enumeration of which must fatigue your attention without much enlightening you as to their value.

For each of these groups the author has prepared a table, indicating for each individual, age, sex, colour of the skin of the covered and uncovered parts of the body, the diameter and curves of the head, forming for each individual a total of thirty-three measurements. . . . The author also offers some observations on the colouration of the hair, eyes, and skin, of the structure of the feet and hands, and the resisting power to cold possessed by the Arabs and Kabyles. The hair of the Arabs is generally black, sometimes nut-brown or auburn. That of the Negroes is a jet black, and presents the peculiarity that it only becomes crisp when it has reached a certain length. Large and horizontally slit, the eyes of the Arabs are more or less dark brown, exceptionally there are seen green eyes. The eyes of the Kabyles are of a much lighter colour; when grey they coincide with a notable whiteness of the skin, red hair and freckles. In the Negroes, the eyes are frequently so dark that it becomes impossible to distinguish the pupil of the iris.

The Arabs of Algeria are distinguished into Town-Arabs or Moors, and Tribe-Arabs. In the former, the skin is of a lighter colour, in the latter it is bronzed, or nearly black. This is partly the effect of

differences in habitation and dress existing between the Moors and the Tribe-Arabs. As regards the extremities, the hand is characterised by want of suppleness and restricted extension, the effect, no doubt, of field labour, which chiefly engages the prehensive muscles. The feet are rather flat, and considerably widened at the anterior part. The Arab, in walking, turns his great toe outward. Among the Moors the toes are more or less close to each other, and curve downwards, so that in some mountaineers they assume the form of claws. Either the habit of walking barefoot, or the shape of Algerian foot-gear, may account for this.

It has caused some surprise that Algerian troops support so well the rigours of a Parisian winter. The fact is that in the hilly districts of Algeria dry frost alternates with snow-storms, whilst in the valleys abundant rains give rise to a very disagreeable cold temperature. The variations in temperature in some parts are very great, which the Arab supports better than the European. Thus, his epidermic resistance acquires an energy, which we rarely find among our citizens. The memoir also contains a table representing various modes of tattooing. From some of the forms, the crucial, for instance, on the forehead, the Christian origin of the Kabyles has been inferred. But, in the first place, it is not always seen in the Kabyles, whilst it is met with among the Arabs of the south, who are Mussulmans. . . . M. Simonot concluded in the following terms:—Whilst fully recognising the merits of the pathological studies of MM. Morel and Koeberle, and appreciating the value of the researches of M. Goulin, M. Wake, and the author of the anonymous treatise, we felt justified in awarding the "Prix Godard" to M. Gillebert d'Hericourt, whose eminently practical essay is in complete accord with the anthropological instructions which the society has adopted as the programme of its studies.

M. Gillebert d'Hericourt, in thanking the Society for having awarded to him the "Prix Godard," expressed a wish to receive it in the shape of a gold medal.

M. Bonté observed that such a precedent might be very embarrassing to some futura laureates who might prefer hard cash.

M. Sanson could understand that a laureate might prefer a medal, but, as he also shares M. Bonté's doubts, he would propose a silver-gilt or bronze medal, and the surplus in money, a mode now frequently adopted.

Consulted by the President, the Society agreed to deliver to M. d'Hericourt his prize in the shape of a gold medal, unless he preferred the combination proposed by M. Sanson.

M. Henri Martin addressed a note to the Society relative to some observations attributed to him by M. Lagneau in his summary on anthropology in France.

DR. DAVID PAGE ON MAN, IN HIS NATURAL HISTORY RELATIONS.*

For a long time the public have asked for an elementary work on that great science which is now engrossing the attention of all thinking men and women—the science of Anthropology. The preparation of such a work was no easy task. It required for its composition an adept not only in scientific arrangement, but one, who had great literary power combined with the true spirit of scientific inquiry. At last such a book, we do not hesitate to affirm, has been offered to the world, and we believe that it will be accepted by the public with both gratitude and admiration.

Dr. DAVID PAGE, after devoting his life to the study and popular exposition of geological science, has now commenced to do for anthropology what he had formerly done for another great department of inductive science. Dr. Page's text books on geology have done as much to advance the popular study of geology as that of the writings of any living man. It is therefore with no ordinary feelings of satisfaction, that anthropologists see such a man coming boldly forward to swell an important department in their ranks.

The speech which Dr. Page recently delivered at the Dundee Anthropological Conference, at once pointed him out to be one of the future hopes of anthropological science. The publication of the book before us, will show a larger audience, that he is a fit man to become the popular exponent of the science. Dr. Page, in this book, has addressed a Scotch audience ; and hence it is, that his book is especially suited to a large class of English students. No doubt the author well understood the wants of the audience whom he addressed, and knew what sort of fare would best suit them.

The nourishment set before his readers does not certainly consist in very strong meat. It is, on the whole, a judicious mixture of meat and milk, and well suited, we do not doubt, to the requirements of the age for a section of both the English and Scotch public. We are, however, disposed to think that its influence will be much more felt North of the Tweed, than in England. In the latter country it is, however, very well adapted to elementary study. It will excite

* *Man : where, whence, and whither ; being a Glance at Man in his Natural History Relations.* By David Page, LL.D., F.R.S.E., F.G.S. Edinburgh : Edmonston and Douglas, 1867.

the attention, without either satisfying or nauseating. There is no pretension whatever about the book. It is wholly free from all the jargon of scientific nomenclature, and is, at the same time, rigidly scientific in both its general treatment and in its scientific details. The elements of this work formed the subject of two lectures delivered before the Edinburgh Philosophical Institution in November, 1866; and the author has now expanded these lectures into a little volume of some two hundred small pages. In the preface he informs us, that "by many the views advanced were adopted without reserve; by some, though not adopted, they were received in a spirit of candour and inquiry; while by a few the whole argument was met by the most vehement and unreasoning opposition." He then goes on to tell us that the present volume is written as a vindication of the "misrepresentations," to which, "either ignorantly or intentionally," his lectures were subject.

We have no intention of anticipating the contents of this book: but do not hesitate to say, that it is one which any anthropologist may, with safety and good effect, put in the hands either of his own children, or of that large and daily increasing class who come to him for advice and for instruction.

The plan of the work is briefly as follows. After a very well written introductory chapter, the author treats of the question of man's zoological, geographical, ethnological, and functional relations. The next section treats of man's historical, geological, genetic, and progressive relations. A short conclusion and summary complete the work. Nothing could be more rigidly simple than the plan here given.

We think the title of the book to be most unfortunate, and consider it would have been much better as placed at the head of this article. We also especially object to the heading of the chapter, "Man, his Ethnological Relations." To tell us that ethnology means the "science of races," is to invent something in nature which really has no existence, in order to keep up the use of a word that is now generally discarded in scientific literature, especially since Professor Huxley defined it to be the "science of man fancying," and thus only fit for the pages of *Bell's Life* or some other paper devoted to the noble science of self-defence. Dr. Page, too, like most other modern writers, tells us that the ethnologist restricts himself to the study of "existing races," and adds, "can throw no light on the origin, antiquity, or destiny of man." He uses the two words, ethnology and ethnography, as synonymous—a sufficient evidence that one of them is at least unnecessary. At p. 76 he says, "ethnology or ethnography, though the science at present most in favour, must after all be regarded as a

mere department of anthropology." On this point there is now fortunately little difference of opinion, but we trust that in the next edition of this work we shall only have the word ethnography used to signify the study of existing races or species. We submit, however, that it would have been better and more correctly scientific to have headed this chapter Man, his Specific Relations, or even Man, his Racial conditions, than to have again introduced a definition of ethnology which has long ago been abandoned by ethnologists themselves. If a writer like Dr. Latham protests that there are no such things in nature as the "races" of man, it is surely a little hardy of Dr. Page to attempt to give a definition to that which has no existence? Ethnology, when employed now, is generally used in the same sense as historical anthropology, which includes historical and comparative philology, mythology, &c., while ethnography is now by pretty general consent confined to mere descriptions of existing species or varieties of mankind—or in other words, descriptive anthropology.

A few short extracts from each of the sections of this little book will assist to reveal to the reader an indication of the author's treatment.

In the introduction, p. 16, we read as follows:—

"Physiologically, too, great advances have recently been made in the determination of organic functions; and psychologically, writers are beginning to hazard something like a scientific opinion as to the relations that subsist between physical organisation and mental manifestations. But with regard to man's relations to the great scheme of life—his where, whence and whither in the cosmical plan of continuity and progress—few have made them the subject of earnest study, and still fewer have ventured to give expression to their convictions. It is only of recent years that the study of man has been recognised as an independent branch of natural science, under the title of anthropology, and the only British institution for its furtherance, the Anthropological Society of London, is but a thing of yesterday. If not ignored on certain questions, the investigation has at least been discouraged; and when not ignored, it has been too much held in abeyance to popular prejudice and preconceptions. Such weakness, however, is far beneath the dignity of science; such restraints on free and rational inquiry can never be conducive to the interests of religion. Man, in all his relations, is intimately connected with external nature; and these relations, as bearing on his physical, intellectual, and moral welfare, become not only legitimate, but imperative subjects of research.

He then says that the precept "know thyself" is alike applicable to the race or the individual, and continues:—

"It is of no avail to tell us, as some would vainly do, that man's chief business is with the present, and the duties which lie before him in daily life, and that it is of little moment to him whether

his race has inherited this globe for six thousand or for sixty thousand years, or whether he shall continue to inherit it in increasing or decreasing variety. We are compelled, by an irresistible impulse of our nature, to look backward to the past as well as to look forward to the future; and necessarily so, since the main business of the present is to draw from the past, that it may be prepared for the future. The present is thus intimately connected with the past, as it is inseparably interwoven with the future, and cannot be fully understood unless in relation to what has gone before, as well as to that which must inevitably follow. The great business of life—even that which lies most immediately before us—will be more fully understood and more rationally performed the better man knows the place he holds and the relation he bears to the plan of creation. Man's where has descended from his whence, and his whence and his where must indicate his whither. Where are we? whence are we? and whither are we going? are questions which incessantly force themselves upon our attention, and science merely seeks, with all humility and reverence, to arrive at a satisfactory answer. We cannot stem this desire for knowledge, because nature has made it necessary that we should know, and whatever light can be reflected from the past on the path of the present is a guide to the existing, just as every indication of the future, from a study of the past and present, must be an incentive to compliance with its requirements."

At page 22 we read:—

"It thus becomes truly pitiable to hear from certain quarters their misrepresentations of scientific aims and scientific conclusions. In fact, it is easier to bear than to hear them, and one can scarcely avoid the conviction that those who can misrepresent the opinions of others in order to strengthen their own argument would have little hesitation in falsifying facts to subserve a similar purpose."

At page 23,—

"We are anxious at the outset to place the question on a fair footing as regards its religious aspects, because men of science have hitherto been too much deterred from giving expression to their opinions through fear of incurring accusations of scepticism and infidelity. There is nothing more frequent than denunciations from the pulpit and platform against the tendencies of modern science by men who are not only ignorant of the rudiments of science, but who have bound themselves by creeds and formulas before their minds were matured enough, or their knowledge sufficient to discriminate between the essentials and non-essentials of these restrictions. And here it may be remarked once for all, that no man who has subscribed to creeds and formulas, whether in theology or philosophy, can be an unbiassed investigator of the truth, or an unprejudiced judge of the opinions of others. His own sworn preconceptions warp his discernment; adherence to his sect or party engenders intolerance to the honest convictions of other inquirers. Beliefs we may and must have; but a belief to be changed with new and advancing knowledge im-

pedes no progress, while a creed subscribed to as ultimate truth, and sworn to be defended, not only puts a bar to further research, but, as a consequence, throws the odium of distrust on all that may seem to oppose it. Even when such odium cannot deter, it annoys and irritates; hence the frequent unwillingness of men of science to come prominently forward with the avowal of their beliefs. It is time this delicacy was thrown aside, and such theologians plainly told that the scepticism and infidelity—if scepticism and infidelity there be—lies all on their own side. There is no scepticism so offensive as that which doubts the facts of honest and careful observation; no infidelity so gross as that which disbelieves the deductions of competent and unbiassed judgment.”

We must content ourselves with only one more extract from the introductory chapter, as follows:—

“As astronomy triumphed over the earlier notions respecting the earth's planetary relations, and geology over the views of its limited antiquity, so will science, so long as it is true to right methods, establish ere long more rational beliefs as to the origin, antiquity, and progressive ascension of mankind. In the meantime, the battle has to be fought against prejudices and misconception; but the warfare will the sooner terminate the sooner that science gives unmistakable utterance to its convictions, and hurls back upon its opponents the unworthy weapons of their unavailing attacks.”

In the body of his work, Dr. Page has well discussed the present chaotic state of the science of man, and points out, what others have long seen, that “the anthropologist must mainly abide by his own deductions.” The following extract will, we presume, excite the bile of Professor Huxley. Speaking of the absurd distinction made in our classifications of different forms of animal life, the author adds:—

“Strip these ‘species’ of their colours and covering, and the skeleton of the one could not be distinguished from that of the other; but place the skeleton of the African negro beside that of the European white, and a child might detect the difference.”

We believe that in a recent lecture at Birmingham, Professor Huxley spoke of such views as “ridiculous nonsense.” We only wish that so distinguished an anatomist may live to see and confess the ridiculous position in which his fanaticism has placed him. It is for those who are in Professor Huxley's ridiculous position that we print the following truism, taken from the conclusion of Dr. Page's admirable little work.

“All races, as well from their inherent natures as from the nature of their position, cannot be dealt with alike; it were waste of energy to attempt civilisation where nature has denied the capability, and it were surely wiser to remove the obstacles to improvement where improbability exists, than to seek for improvement where experience has told us it is hopelessly impossible.”

One more extract from this work and we must bid the author adieu, trusting soon again to meet him. In the meantime, we heartily thank him for his first contribution to our science, and trust it may be the forerunner of many others.

"Such are the conclusions to which our inquiry legitimately leads, and which, when rightly viewed, have practical as well as mere theoretic bearings. We say *practical bearings*, for no subject, however novel or sensational, can secure a position among the sciences, or excite a general interest, unless it has something real and practical to recommend it. 'Philosophy,' it has well been said, 'is never more exalted than when she stoops to administer to humanity.' From a knowledge of our zoological relations, then, we may learn more fully the nature of the bonds that connect us with our fellow-creatures, and the offices towards them we are bound to perform. Linked to them by the closest biological ties, yet raised above them by higher physical and mental adaptations, we have manifestly duties towards them; and these duties must surely have a deeper significance to the mind of one who knows all this, than to the mind of another who remains unfeelingly ignorant of the relations that connect him with the rest of vitality."

GASTALDI AND KELLER ON ARCHAIC ANTHROPOLOGY.*

At a time when England is about to be visited by so important an institution as the *Congrès International d'Anthropologie et d'Archéologie Préhistoriques*, it is very desirable to take some short retrospect of the results of the very considerable discoveries in archaic anthropology made within a comparatively short time, thus clearing the way for the additions to our knowledge to be anticipated when the Congress begins. The two volumes before us contain a body of facts concerning the lake dwellings found in Italy, Switzerland, and other localities of great interest, worthy of careful study, and they are profusely illustrated by engravings of the objects found in the localities described. To those desirous of informing themselves of the results of the researches which have from time to time been

* *Lake Habitations and Pre-Historic Remains in the Turbaries and Marl-beds of Northern and Central Italy.* By Bartolomeo Gastaldi. Translated by C. Harcourt Chambers, M.A., F.A.S.L. Longman & Co. 1865.

The Lake Dwellings of Switzerland, and other parts of Europe. By Dr. Ferdinand Keller. Translated by John Edward Lee, F.S.A. Longman and Co. 1866.

made, these two books will be very welcome. To some extent the work of Cavaliere Gastaldi possesses the value of being original, as a large portion of it has been written expressly for the English edition, and the whole has been issued with his co-operation.

The first portion of his book is occupied with an account of the objects of the Stone Period, found in the Valley of Aosta, in Sicily, near Mentone, near Spezzia, at Monte Argentario, at Monte Tegnoso near Leghorn, at Brescia, and in various parts of Lombardy, Modena, and Piedmont. Articles and utensils of the Roman period, first, and then of an anterior civilisation, appertaining to the Bronze Age, were also found in the *marne* or marl-beds, and identical in character with those discovered in Switzerland, Germany, and Denmark, near Parma, Reggio, and Modena. M. Gastaldi extends his account to the progress of the excavations in various parts of Italy to 1864. The careful manner in which the engravings are executed render this work excessively valuable to the student, and indispensable to the working library of the anthropologist.

Dr. Keller's work, as presented to the public by Mr. Lee, is of a much more extensive nature, and enters most fully into the pile dwellings of Switzerland. The last few years have witnessed a wonderful activity on the part of explorers, and the important results for archaic anthropology can scarcely be underestimated. There is also great reason for satisfaction in the fact that the natives of Switzerland of all degrees have entered with ardour into the search for and preservation of these valuable records of primeval civilisation. Mr. Lee says: "The investigation of the various lake dwellings is now carried on with a zeal and energy which might be imitated with advantage by our own richer and more numerous societies."

In this valuable work, which has had the very great advantage of having been carefully revised by Dr. Keller himself while in the press, almost everything as yet known of the inhabitants of the lake settlements and their culture is comprised; and both practically and in a literary sense, the task is performed with wonderful accuracy and minuteness. Originally, Dr. Keller embodied the results of his investigations in six reports to the Antiquarian Association of Zürich, but the author and translator thought it better to re-arrange and systematise the facts thus obtained. It had at first been proposed to have assigned certain plates to each settlement; and although this arrangement has been adhered to, as far as possible, the multitude of specimens, some fifteen hundred in all, and the constant increase in their number, caused it to be impossible to carry out this arrangement throughout the volume; but as a very excellent index and a careful description of the plates form a feature of the work, there is no difficulty in finding any special object desired.

A restoration of one of these lake habitations is placed as a frontispiece to the book ; and while it cannot but be in great measure purely ideal, it at any rate affords a very good view of the probable appearance of one of these singular colonies. It has also been carefully reconsidered by Dr. Keller, and corrected in some minor particulars from the sketch familiar to the public in various previous publications. One very important feature of this excellent contribution to the literature of this subject deserves special commendatory notice. Dr. Keller has abstained from *theory*, preferring the more modest but infinitely more valuable arena of *fact* ; hence the student of this branch of inquiry may place implicit trust in what is here presented. The plates, which form no inconsiderable part of the volume, have been entrusted to the hand of Mr. Palmer of Newport, who has very skilfully transferred them from the original Swiss plates. Dr. Keller, in the course of his description, has abstained from offering any opinion as to the race-character of the pile-building population, considering this as at least premature in our present state of knowledge.

After some general account of the peculiarities in these buildings, the author proceeds to describe the settlements at Meilen, Moosseedorf, Robenhausen, Irzenhausen, Wangen, Niederwyl, Wanwyl, Allenbach, Markelfingen, the Ueberlinger See, the Lake of Zug, Nidau, Cortailod, Auvernier, Estavayer, Concise, Greng, Montellier, Morges, and many others. With the Swiss dwellings he contrasts the Italian remains, and the value of the book is further enhanced by various memoirs on specialities, contributed by other writers. Dr. Oswald Heer gives an excursus on the plants of the lake dwellings ; Professor Rütirmeyer treats of the animals ; and an analysis of the bronze implements is furnished by Professor von Fellenburg. The remains discovered in Bavaria and Mecklenburg also receive attention ; and the Irish and Scotch crannogs are treated of by Mr. John Stuart. A more complete and instructive volume could hardly have been put forth ; and it is greatly to be hoped that it is only a precursor of many such contributions to the interesting science of archaic anthropology.

Anthropological News.

ANTHROPOLOGY IN GERMANY. — Professor Vogt has just terminated a course of thirty lectures on Anthropology, at Cologne, Aachen (Aix-la-Chapelle), Essen, Elberfeld, and Crefeld, with signal success. At Aix-la-Chapelle there was some attempt, previous to the first lecture, to interfere

on the part of a mob. and the police had to be called out to disperse the crowd with swords. It is supposed this arose from the opposition of the priests of Rome. At Elberfeld, the Protestants, not to be outdone, followed a similar course; but in both cases science was triumphant. Prof. Vogt is about to lecture at Leipzig, Dresden, Hamburg, Brunswick, Hanover, and Berlin, on the following subjects:—1. Introductory. 2. Cave-bear Period. 3. Reindeer Period. 4. Pile Dwellings. 5. Bronze Age. 6. On the Connexion between Man and the Ape. This series will be concluded about March next.

THE ANNUAL RE-ELECTION OF OFFICERS for the Paris Anthropological Society took place on the 5th of December last, when the following gentlemen were elected to the following offices:—President, M. Bertrand; Vice-Presidents, MM. Lartet and Gaussin; General Secretary, M. Broca; Assistant General Secretary, M. Dally; Annual Secretaries, MM. Letonneau and Ranke; Curator, M. Pratt; Keeper of Archives, M. Lemerrier; Treasurer, M. Bertillon; Publication Committee, MM. Alix, Lagneau and Simonot.

INDIAN NEWS.—We learn, through Dr. Charnock, that a distinguished Fellow of the Society, Dr. Leitner, of Lahore, has in the press a work in four volumes, entitled *The Results of a Tour in Dardistan, Little Tibet, Kashmir, Ladak, Rukshu, Zanskar, and Lahul*. Vol. 1 will contain the language and races of Dardistan, discovered by the author when sent on a linguistic mission by the Punjab Government, to Kashmir and Chilas in 1866.

Dr. Exton of Graham's Town is about to go on an anthropological tour to investigate the races south of the Zambesi.

In the *Staats Courant* of the South African Republic of 4th September, appears a Government notice and letter from the Landdrost of Lydenburg, notifying that a white family, consisting of a man and wife and two young children, have been brought out and given up to a Commandant, P. J. Coetser, by the Kafir chief Litonga, successor to the late Chief Umzwaas. The man and wife appear, according to the evidence of the Kafirs, to be the only survivors of twenty-seven families, (being a portion of the *trek* known as the Triegaard's trek), and of which none ever returned, they having been murdered by the natives in the Manekosch land. The man has been among the Knopnose Kafirs from his second year, and later with the Kaal Kafirs, and bears the Kafir name of T'Sjaka. Both man and wife are said to be in their manner and habits just like the Kaal Kafirs—only in colour white. Subscriptions are received by the Transvaal Government for the support, religious instruction, and education of these interesting people. Triegaardt, we are given to understand, trekked from "De Plaat," near Baviaan's River, Cradock district, in the Cape colony, about the year 1834, and was accompanied by one Bam, J. Pretorius, and several other families. These people, it is alleged, set out with the mad project of reaching Jerusalem, or the Holy Land, through the interior of Africa. Towards the end of 1835, a person now resident here, who followed the party with the hope of collecting money, some Rds. 32,000 due by certain of them, came across traces of them about the latitude of Delagoa Bay. Here he found they had quarrelled, and separated into two parties, the one proceeded to Delagoa Bay, the other going northwards into the interior. Two or three survivors of those who went to Delagoa Bay, arrived ultimately in Natal by sea, the remainder having died from fever. Those who went northwards are said to have been murdered by a commando

of Kafirs from Moselekatse. But the history of the wanderings of these unfortunate and misguided men has ever since been shrouded in mystery. They left the colony of the Cape anathematizing the British Government, and caring little where they went, so long as they escaped from its (to them) hateful and oppressive rule! Some say that these people now delivered up, are more probably the survivors of another party, known as the Liebenbergs, likewise murdered by Kafirs, but at a later period. Probably inquiries will now be made, which may result in more certain information as to their name and parentage being ascertained.

MEN-APES.—M. de Quatrefages, on presenting to the Academy a work of M. Vogt, entitled *Memoir on the Microcephali, or Men-Apes*, calls attention to the following points: 1. That the result of the author's researches would be to modify, at least on certain points, some of the conclusions at which M. Vogt's predecessors had arrived—Gratiolet, amongst others. In the comparison of the human brain and the simian brain, due regard had not been paid to the modification of the simian type in the New World. 2. That from Darwin's point of view, two creatures belonging to types originally different might trace their descent from one or several common ancestors; but one could not have descended from the other. M. Quatrefages also perceives an essential difference of type in the fact that "man is a walking animal, and walks on the hinder members"; whilst all apes are climbing animals. He therefore hopes "that the world will give up the notion of finding any kind of ape the ancestor of man." This idea, scientifically incapable of proof, is particularly so when considered from the Darwinian stand-point. --*British Medical Journal*.

THE AÏSSA HOUHA ARABS.—Among the anthropological phenomena of the day are certainly to be included the Algerian Arabs, recently exhibiting in London. They are seven in number, and their performances consist of very singular feats indeed—some indeed, never witnessed in Europe before. After, by rude music, exciting themselves to a pitch of madness, one of them, after an uncouth dance, swallows cactus leaves, stands on the blade of a sword, and bites off the head and tail of a serpent, which he swallows, really or apparently; another of the party swallows nails and stones; a third has a rope tied round his waist, and seven or eight men pull vigorously at the ends; another forces his eye out of the socket with an instrument; and finally, a negro, after swallowing lighted paper, places a live coal in the back of his mouth for the spectators to light their cigars at. Our contemporary, the *Pall Mall Gazette* says:—"This entertainment is simply filthy and repulsive to the ordinary spectator, but it offers more than one interesting problem to the student of anthropology. Making allowance for a good deal of pretence and trickery in the performance of the feats, a good deal may be explained by natural causes. For instance, the cuticle of the African is by nature of a horny character; we have frequently enough seen negroes take up in their fingers red hot coals to light their pipes from, without apparently suffering any pain. Such being the normal condition of the skin, it might be prepared into a kind of hide which shall resist not only the fire but the sword. Whether the skin inside the mouth possesses any peculiarity in the African we shall not pretend to say. Again, Nott and Gliddon, in 'Types of Man-kind,' advocate the theory that each human type resembles in character and personal appearance the other animals which inhabit its peculiar region. Thus the Esquimaux resembles the White bear, the Mongol resembles the

wolf, and the negro resembles the ape—which justifies slavery. We have no doubt that these ingenious Southerners would point to the long-necked Arab, who digests stone, glass, and nails with ostrich-like facility, as an additional proof that their fantastic theory is the correct one. But as to the gouging business we must confess that we can offer no explanation, even of the most unreasonable kind, and we hope that some oculist will deign to give his attention to the mystery."

A HUMAN SKULL has been recently discovered in California, at the depth of 130 feet in the pliocene, contemporary with the rhinosceros, the camel (or a species allied to it) and the fossil horse, in an antiquity far beyond that of the flint makers of Abbeville and Amiens, and outreaching all human estimates of time. The following is a summary of the facts:—"A human skull was found in a shaft sunk on a mining claim at Altaville, near Angelo, Calaveras County, California, by a Mr. James Matson. Mr. Matson states that it was found at a depth of about 130 feet, in a bed of gravel five feet in thickness, above which are four beds of consolidated volcanic ash, locally known as 'lava.' These volcanic beds are separated from each other by layers of gravel, described thus:

1. Black lava	...	...	...	40 feet
2. Gravel	...	...	...	3 feet
3. Light lava	...	...	...	30 feet
4. Gravel	...	...	...	5 feet
5. Light lava	...	...	...	15 feet
6. Gravel	...	...	...	25 feet
7. Dark brown lava	...	...	...	9 feet
8. Gravel	...	...	...	5 feet
9. Red lava	...	...	...	4 feet
10. Red gravel	...	...	...	17 feet

Total 153 feet

The skull was found in bed No. 8, just above the lower stratum of lava. It was covered, and partly encrusted with stony matter. The portions preserved are the frontal bone, the nasal bone, the superior maxillary bone of the right side, the malar bones, a part of the temporal bone of the left side, with the mastoid process, the zygomatic process, and the whole of the orbits of both eyes. The base of the skull is embedded in a mass of bone-breccia, and small pebbles of volcanic rock, encrusted with a thin layer of carbonate of lime. It is now deposited in the office of the State Geological Survey. To the most superficial eye it has a remarkable resemblance to the skull of the Digger Indian; the same rather elevated frontal region and yet large cerebellum, making the animal organs prominent, though showing no marked deficiency in the intellectual process; the facial angle fair, the same width between the eyes and overhanging process over them. The most remarkable feature of the skull was the great thickness of its bone covering; otherwise it was by no means a low or degenerated type. The facts in regard to the discovery of the skull, as stated above, were given in a paper by Professor J. D. Whitney, read before the California Academy of Sciences. He states, however, that he purposes visiting the locality itself, and seeing the exact place in which this interesting relic was discovered.

It is stated by the Sydney papers, on the authority of letters from Fiji, that the Rev. Mr. Baker, Wesleyan missionary at Novora, with a native catechist and his students, have been murdered by a tribe of cannibals. Mrs. Baker and family had arrived at Sydney.

MASSACRES IN THE ANDAMAN ISLANDS.—A report has reached Liverpool from Mr. Barge, chief officer of the ship *Assam Valley*, recently arrived at Akyab from Bombay, that on the voyage the ship called at the little Andaman island, and that the captain, second officer, carpenter, and five of the crew went on shore to cut spars. Those who remained on board the ship saw them surrounded in a short time by a large crowd of islanders, who are notorious for their savage and brutal propensities. The ship lay off the island for three days, but no human being except the natives could be seen, and ultimately Mr. Barge thought that the most discreet plan would be to sail for the nearest port and give information. The vessel is owned by a Liverpool firm, and managed by Messrs. Moran, Galloway and Co., of Liverpool. About ten months ago six men belonging to an American barque went ashore on the same island and were murdered.

ANCIENT ART IN PERU.—The discoveries in archaic anthropology bid fair to prove fertile beyond the anticipations of all. It is now affirmed that flint arrow-heads and other primitive weapons have been found in such relation to the bones of the mastodon as to imply that the animals perished by the hand of man. We have now to add some new discoveries to the list. In the guano islands of Peru, far below the guano deposits, many objects of ancient art have been discovered as the deposits have been removed. The formation of these deposits is exceedingly slow, and the guano has not perceptibly decreased in quantity for the last three centuries. It is almost impossible to compute the area at which the formation of these deposits began. Many interesting objects have been recently discovered: one is a wooden idol, about one foot high, representing a squatting female, with the legs crossed and the hands placed together across the breast. The ears are bored, and the lobes widely distended with ornaments, such as gave to a certain class of the ancient Peruvians the name of Orejones or Big-Ears. It was found at great depth, firmly imbedded in the guano of the Lobas Islands, with the salts of which it is so completely saturated that it has very nearly the specific gravity of marble. Other objects, formed of thin plates of silver, and apparently struck out by dies, have been found in the Chinca Islands, at a depth of thirty-two feet, representing fishes still inhabiting Peruvian waters. Captain Juan Pardo, an Italian, also discovered near these objects the body of a female, the head lying at a short distance off. The breast and ribs were covered with thin sheets of gold. Unfortunately this was not preserved.

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IRAN AND TURAN.*

By J. W. JACKSON, Esq., F.A.S.L.

ANTHROPOLOGY is not yet sufficiently cosmopolitan. Its standpoint is Europe. Its standards are Caucasian. It partakes too much of the narrow exclusiveness of classic and Christian ideas. It must become more thoroughly humanitarian in its data and its outlook. It must undergo emancipation from the limitations of olden and traditional ideas. It should have no preferences, no preconceptions, and, consequently, no prejudices. While admitting the undeniable fact of a hierarchy of races, it should not disdain the minutest and most searching investigation of the corporeal structure and mental characteristics of inferior types. It should endeavour to understand the spirit of their institutions, and should seek to recover, as far as possible, the facts of their history. More especially are these remarks applicable to that second great division of humanity, now generally designated the Turanian.

We see here the most numerically powerful family of mankind, diffused, till the comparatively recent colonial extension of our European populations, over a larger geographical area than any other, and ranging in culture from the ichthyophagous Samoyedes and Esquimaux, up through the nomads of Mongolia and Tartary, to the agricultural and commercial peoples of China and Japan, whose civilisation apparently antedates authentic history. Are we yet prepared to estimate these ruder yet still vigorous children of humanity at their proper worth? Are we not still somewhat influenced by the olden spirit of Iran and Turan, we "Gods" regarding these "men" with an

* *The Chinese Classics*, by James Legge, D.D. Hongkong, at the author's; London: Trübner and Co. *Buddhism in Tibet*, by Emil Schlagintweit, LL.D. Leipsic: F. A. Brockhaus; London: Trübner and Co. *The Legends and Theories of the Buddhists*, by R. Spence Hardy, Hon.M.R.A.S. London and Edinburgh: Williams and Norgate.

indifference, if not contempt, which perhaps they scarcely deserve. Five hundred millions of human creatures, of whom, at the lowest calculation, four hundred millions are civilised, cannot be ignored. In periods of Caucasian collapse, when the nervous races have become exhausted and effete from over excitement, these tribes of bone and muscle rise into importance, and under such leaders as Attila, Ghengis Khan and Tamerlane, Togrul Beg, Alp Arslan and Othman, become of dread significance even to the statesman. Of their value to the merchant, Europe is yet but dimly conscious, but whether as consumers of goods or suppliers of labour, it is very obvious that they have yet to revolutionise the markets of the world; while even to the theologian the fact, that although not the originators they are the great recipients and champions of Buddhism, should give them an interest, second only to that of the still greater people of the West, who have become in a similar manner the recipients and champions of Christianity.

To the anthropologist these numerically-powerful and widely-diffused Turanians present problems of the utmost importance; still, for the most part, awaiting solution at the hands of future inquirers. What is their ethnic age? Are they youthful, mature or effete? Is their present area larger or smaller than in former ages, and more especially in prehistoric times? Is their civilisation primal or derivative; and if the former, is it older than that of Caucasian peoples? Are they radically nomadic, so that civilisation only corrupts them, or if normally susceptible of culture, is there a limitation to their progress arising from the inferiority of their endowments? Have they any thoughtforms peculiar to themselves, and if so, are their ideas of any value to superior races? If, in the following paper, we attempt any reply to these and similar queries, let it be distinctly understood that we do so purely in the spirit of speculation and not of dogmatism. The time to speak with authority on such subjects has not yet arrived, and he were the enemy rather than the friend of anthropological investigation, who should attempt to arrive at a premature decision on questions still *in dubio*, from the want of adequate light for their satisfactory solution.

Of the relative position of the Turanian, that he is higher than the Negro and lower than the Caucasian in structure and intellect, there can be no doubt. He represents material force. His cerebral power is basilar, not coronal. He has volume of brain, without proportionate altitude. His physiognomy is rude and unfinished. The face has a breadth disproportionate to its length. The features lack distinctness and elevation. They are not adequately chiselled. The expression is sensual rather than spiritual, and animal rather than human. He

wants beard, and is obviously deficient in the higher characteristics of matured manhood. He is the arrested infant of humanity, and his ideas and institutions correspond with this ethnic immaturity of type. As compared with the higher castes of the Caucasian stock, he wants "blood," that is, speaking anatomically and physiologically, nerve. His look and build are coarse and vulgar. He lacks the grace and ease, the elasticity and fire of the Caucasian. By no possibility could he be made physically presentable, as "thoroughbred." He is wanting in strongly-marked individuality of character, his mind, like his features, being unfinished. He prevails by mass, he is formidable by numbers. He is great only on the material plane. His age of supremacy is passed. He was wanted as a moral destroyer and physical regenerator at the ethnic collapse of the more nervous Caucasian. It is now his turn to submit to conquest, and we may add, colonisation. His ultimate reduction beneath the rule of a superior race is simply a question of time. He wants innervation—and he will obtain it. He needs an intellectual baptism—and it will be provided for him.

We have spoken somewhat contemptuously of our flatfaced, rough-hewn brother, but it must not be supposed that we are wholly devoid of respect for him and his attributes, whether moral or physical. He has achieved some rather notable things in his day. Even history tells us that he swept as a resistless conqueror from Benares to Constantinople, and his grander feats in this way, probably antedate its oldest chronicles. He has built up and kept together for some millenniums, the most populous empire on record, and there is some reason to believe that he invented gunpowder, printing, and the mariner's compass. Such a being must not be confounded with an African, much less an Oceanic Negro, or an Australian aborigine. His past is earnest of his future. He was not an irreclaimable savage in the former, he will not prove a hopelessly indocile pupil in the latter.

To understand humanity as a whole, we must regard it as a mundane organ, a structural arrangement for the exercise of nervous function and the manifestation of moral sentiment and intellectual power. Through animals the telluric life feels, through men it thinks, and as the higher orders of animals feel more acutely, so the noble races of men think more profoundly than the lower. As crystalisation foreshadows vegetation, so is the vegetable a prophecy of the animal, while in the latter we find a prediction of and preparation for the man. The bones, the blood-vessels, the muscles and the nerves of earth's collective organism, to be repeated and reproduced on the human plane.

Ere we can accurately define the relative place of the grander divisions of mankind, and estimate at anything like their due significance

the racial demarcations by which they are separated, we should first endeavour to discover whether humanity itself, regarded as a collective whole, be a species, genus, order, class or kingdom ; for on this must depend the place and character of its constituent families. If it be only a species, they are but varieties, and probably not permanent even as such. If it be a genus, they are still but allied species, with perhaps little susceptibility to greater diversity than that which they already exhibit. As an order its possibilities are enlarged, while as a class or kingdom, we could but remotely conceive of its stupendous arc of variation during the coming ages of geologic time. But are we in possession of the data requisite for defining "the place of man in the animate scale." Are we yet indeed prepared to decide on his ethnic age, to speak with confidence respecting his maturity or immaturity as a type of organic being, and if not, then it assuredly behoves us to be somewhat diffident in the utterance of our opinions on a subject yet so imperfectly within the ken of science.

In some previous papers we have given our reasons for regarding man as yet ethnically immature, as being indeed still merely germinal, the promise rather than the fulfilment of the "divine idea" of humanity. But if so, then he will not only be individually but collectively imperfect and unfinished ; as a type he will lack the due demarcation and effective development of his several members. He will be altogether wanting in some of his organs, and but feebly pronounced in others ; that is, granting him, for example, to constitute an order, several of his genera will be but vaguely indicated, and many of his species so faintly defined, as to be scarcely if at all perceptible, even to the keenest observer. More especially is this so at the present time, and with the exception of India, throughout the area peopled by the Caucasian race. This perhaps needs some little explanation.

The division of races, as this ill-defined term is commonly understood, is largely geographical. The Negro, the Turanian and the Caucasian have their several areas, so also have the Semites and the Aryans, the Celts, Teutons and Slavons, or rather perhaps, to put the matter in the past tense, they once had them. Wars and migrations have, however, within the last two thousand years, somewhat confused things in this respect. Not to mention the rather inexplicable fact of undoubted Aryans being found both on the Ganges and the Thames, we see Saxons in England, Scandinavians in Scotland, Franks in Gaul, Slavons in Germany, Magyars in Hungary, and Turks in Greece, the ethnic effects of that stupendous baptism of the nervous races by their muscular correlates, which accompanied the collapse of classic civilisation, and revolutionised the world from Tartary to Britain. Slowly but surely, however, these intrusive types are being absorbed

by the autochthones, the aboriginal and native race of each area, temporarily subdued, though not permanently displaced by their invading conquerors. But following, and perhaps to some extent consequent upon, this ethnic tempest, by which alien races from without, were superimposed by the fortune of war, on most of the Caucasian peoples, both of Europe and Asia, there was another ethnic commotion within these nations, which we may term social, as contradistinguished from those military migrations and political changes, of which ordinary history takes more especial cognisance; and this was the breaking down of the old castes, the disruption of that interior structure of civil orders and classes through which the national life discharges its more important functions. This is a subject demanding far more attention on the part of Anthropologists than has yet been accorded to it, and as it is moreover intimately connected with the specialities attaching respectively to Iran and Turan, we shall without further apology enter into its bearings on the historical progress and ethnic development of humanity.

Caste is not an accident, nor even an invasion of the natural rights of man; on the contrary it is a legitimate assertion of them. When rightly based, it is simply the expression of a law, the law of organic development, and in virtue of which, as there are distinctly separated members each with its own special function in an individual body, so are there distinctly segregated species, genera, orders, classes and kingdoms in the realm of nature, and in perfect correspondence with this, distinctly characterised ranks, professions and trades, with their respective duties and responsibilities in the body politic. This is only a re-statement of the palpable fact, that nature in her arrangements is eminently hierarchical and not democratic. This truth will be readily admitted by all anthropologists as regards the more distinctly marked races of mankind; but few perhaps are yet prepared to entertain it in reference to the social subdivisions of a civilised nation. These have hitherto been always regarded as artificial, and therefore, in a sense, as arbitrary. This is especially the view of all social distinctions maintained by the "liberal" party, whose extreme exponents, carried onwards by the levelling principle of equality, do not hesitate to deny the natural hierarchy of races. It is also the communistic element, underlying the twin incarnational faiths of Buddhism and Christianity, and in virtue of which they were opposed not only theologically but socially, not only in doctrine but practice, to the eminently hierarchical systems of Brahminism and Judaism out of which they sprang, and which they in part superseded, by the law of reaction. As already observed in a preceding article, on "the Roman and Teutonic," these eminently democratic faiths, whose celibate hierarchies

have ever to be recruited out of the laity, were the appropriate spiritual accompaniments of that outburst of the muscular races which gave Turan a temporary predominance over Iran.

But although thus the predominant political idea of our age, and in a sense the underlying principle of our religion, it is still an open question whether this notion of "equality," as between the several orders of a state, be based on truth, or whether, as in the case of most other fallacies, religious, political, and social, it be not an exaggerated and one-sided statement of the truth, the silver side of the shield only, the golden being conveniently ignored for the occasion. Is it not, in short, simply the expression of opinion appropriate to a negative and materialistic era, that very properly, because characteristically, prefers quantity to quality? being in all this the reverse of a positive and spiritual age, which builds up rather than pulls down, and prefers the affirmation of truth to the mere denial of error, and whose manifestoes consequently are not protests but proclamations. And here we are brought to the beginning of a rather important inquiry, if not landed in sight of a somewhat momentous conclusion, namely, the essential character of our religion and the special quality of our aristocracy.

The reader will be at no loss to perceive that these inquiries go down to deep roots, and extend to remote issues, as all fearless inquiries based on race, must necessarily do. Of the essential character of our religion, of its place and function in the historical development of the religious idea of humanity, we purpose speaking more at length towards the conclusion of the present paper, in our contemplated parallel between Buddhism and Christianity, when we come to treat of the extensive adoption of the former by the more civilised divisions of the Turanian race. Our more immediate remarks then apply only to the ethnic origin, and therefore, as we have said, the essential character and quality of the hereditarily gubernational classes, from Persia to Ireland, that is throughout the entire area of Iran, with the exception of that extraordinary moral fossil, Brahminical and caste-ruled India.

That the existing aristocracy of the civilised world is failing, that it is proving unequal to the demands of the age, cannot for a moment be doubted. The *fact* is universally admitted, but its *cause* is still an open question. By most writers this subsidence of the old ruling orders is attributed simply to moral influences and political circumstances; in other words, we are succinctly said to live in a *revolutionary* age. And this convenient explanation is, of course, quite satisfactory to the statesmen, and, we may add, the political philosophers of our time. The anthropologist, however, will scarcely think that he has thus fully accounted for the phenomenon. Let us then, if possible,

probe the matter somewhat deeper. Our existing aristocracy is the bequest of conquest, as aristocracies often are, but observe in this case, of conquest, for the most part, by an inferior race. That is, the ruling orders of modern Europe and Western Asia, were imposed upon them at their period of racial subsidence, when the nervous types were being ethnically baptised by their muscular correlates. This great and necessary, though temporarily disastrous, movement made the Tartar supreme in Persia, and gave to the semibarbarous Turk the political lordship of Greece and Syria, while it converted Gothic chieftains into the Feudal Barons and puissant Princes of mediæval Europe. The rule of such men could only be the expression of military, that is *material*, supremacy. They were not a natural growth, but an artificial graft. They were not a normal product of the national life of the higher Caucasian peoples, but a gubernatorial usurpation, the product, and, as we have said, the bequest of foreign conquest, on the part not only of an alien but also an inferior race. Their rise was coincident with the fall, and their disappearance cannot fail to synchronise with the racial resurrection of the subdued populations, over whom they have borne a sway of which they have been long unworthy.

Let us clearly understand that the religious and political revolution which is now progressing throughout the civilised world, while no doubt more immediately due to moral forces, is also very largely a result of racial movements, whereof history in this case very fortunately enables us to trace the course. Our religion and government are due primarily, to a duplex invasion, moral and military, rendered possible by our ethnic collapse. And if this be so, then will both have to disappear, whatever the process employed for their removal, when this ethnic collapse which rendered them possible, is succeeded by that racial resurrection, which cannot fail to succeed it. The whole matter is simply a magnificent illustration, upon the grandest scale, of the law of action and reaction. Now it is in the midst of this reaction, with all its inevitable concomitants of conflict and confusion, that we find ourselves, and hence, as already remarked, the difficulty of studying the subject of caste, more especially from the data afforded by modern Europe.

But our investigation of this subject is still far from exhaustive, its especial bearings on Iran and Turan have yet to be illustrated. The institution and growth of caste is a process of social development, and marks the advance of the body politic towards *specialisation*. Hence its effective manifestation among the lower races, is nearly, if not absolutely impossible. There is less of it among the Turanian than the Caucasian peoples, and less of it among the muscular than the nervous races. It is a process of edification to which the merely military pre-

dominance of a muscular race is necessarily opposed. Strictly speaking, caste, in its proper sense, that is as a hierarchical arrangement of the several orders of a community, is ever the product of a spiritual era, is the result, if we may so say, of spiritual and positive as contradistinguished from material and negative tendencies. We have spoken of caste as *hierarchical* in its essential character, and we have used this epithet advisedly. Caste when a natural development from within, implies the predominance of the more over the less morally and intellectually gifted members of a community. Speaking physiologically, this means the supremacy of nerve over muscle—in other words of intellect over matter. Hence, where the system is even approximately entire, as in ancient Egypt and India, the highest caste is ever the sacerdotal and not the military order, the former being the head and the latter the arm of the community. It is the inversion of this which constitutes the weakness of the titular and territorial aristocracy of modern Europe. Derived as orders, and to some extent as families, from the Feudal nobility of the middle ages, they represent the second and not the first-class in the state, a condition of things which, however, with the aid of a celibate church that ever claimed but seldom possessed virtual supremacy, amply sufficed for that rather exceptional period, which followed on the subsidence of the nervous and the predominance of the muscular types. But it does not and cannot suffice for the present period of reemergence, which demands and will obtain the reinthronement of intellect in the high places of the earth.

Now the truth of much that we have said on this subject will no doubt be readily admitted in its application to the past, but not to the present and the future. Caste, say the radical reformers, is practically defunct—and can never undergo a resurrection! An indisputable truth from *their* standpoint—a most transparent fallacy from *ours*. This is rather strong language. We know it, and only utter a sentiment, so frankly condemnatory, after due consideration. We would not, however, base our conclusions only on assertion. Caste has existed, still to some extent exists, everywhere—even among savages. It was once the social rule of all Caucasian peoples. The law of the epicycle might suffice to assure us, that in all its stringency and sanctity, in all its power and authority, in a higher state of development and with more complexity and subdivision, that is more of specialisation than ever, it will yet exist again—under the fostering and *edifying* influences, we repeat, of a spiritual era. It is even now rapidly germinating, and is most advanced in its growth, among the foremost nations of the world, that is the civilised peoples of Western Europe, and among these, has attained to its most vigorous condition in Britain! These we know are very unpalatable statements to some

people, but truths are not the less valuable and important for being unpleasant. Let us, therefore, go yet more minutely into this matter.

The savage is equal to nearly all his necessities. He is his own tailor, shoemaker, bowyer, and cook. He wants, in the way of external specialities, only his medicineman and his chief—the germ of a sacerdotal caste and a military aristocracy. The nomad presents these germs in a more advanced condition as priest and prince, the former the subordinate member of a Lamaitic hierarchy, the latter supported by nobles, and sometimes himself nominally subject to a remote suzerain. The agricultural barbarian has already his trades and professions, his rather effectually developed hierarchy, and his nobility of many grades and distinctly marked rank and function. But it is only in civilised and, we may add, modern nations, that this “division of labour,” in reality, this “specialisation of function” is carried out to anything like the extent and complexity which may enable us to estimate its future range and importance. To one who sees the inevitable direction and resistless force of this movement, and who is, moreover, sufficiently the master of analogy to perceive its relationship to the steadily organising developments of nature herself, the cuckoo cry of “equality” is simply absurd—as ridiculous because as impracticable, as the wild notion of some poor French communists, that by the rigid enforcement of certain rather stringent regulations respecting the compulsory marriage of the short to the tall, they might ultimately ensure that most desirable phase of their beloved equality—that of equal stature among all the citizens of a state!

And now, again, we hear our “liberal” friends, with one consentient voice, declare that they have not the least objection to any degree of inequality, provided it be simply the result of fair competition, the legitimate effect of individual energy and ability, with “a fair field and no favour,” in the open arena of the world. What our friends object to, is the *hereditary* transmission of advantages so obtained. And here their abstract ideas and *à priori* assumptions find their appropriate limitation, by coming into direct contact with the *facts* of nature. “Natural selection,” and “the struggle for existence” necessarily imply the *hereditary* transmission of qualities and their resultant advantages, in ever accumulating force, whether in the vegetable or animal, the bestial or the human sphere. Caste, in short, speaking in Darwinian language, is simply a transmissible variety, preparing to become a species, and perhaps ultimately even a genus! Like all other arrangements of the animate scale, it is purely selective only at its commencement, hereditary transmission being one of the necessary conditions of its permanent existence. All this is clearly understood and practically acted upon in the animal sphere. Nobody thinks that

first-class race-horses can be obtained by *selection* alone. In addition to this, they must be *bred*. It is the same with dogs, cattle, sheep, and pigeons; but not, say our radical friends, with men.

We have been rather severe on "the liberal members." Let us see if it be not possible to do them a little justice. We live, as already observed, in an analytical and disintegrative age, whose vocation it is to destroy the shams and unveracities bequeathed to us by an effete past. Now among these are no doubt the usurping castes, placed for a time in undue and unnatural supremacy, by the fortune of war, over races inherently and essentially, that is, organically and mentally, superior to themselves. Every one sees this as regards the Greeks and Turks, simply because the inequality is there so palpable as to strike observers, even of the coarsest perception. But the law which necessitates the "scaling off" and ultimate disappearance of the Tartarean lords of Hellas is also at work with equally irresistible potency in producing the ultimate removal and absorption of the Gothic lords, the feudal nobility of Southern and Western Europe. Thus, then, it would appear that our liberal friends have a vocation. All honour to them, then, in its discharge; and in the meantime, like other mill-horses, they are perhaps none the worse for having the blinds on, not seeing exactly whither they are going, or what follows them.

What then is it which really awaits the world in reference to caste? And we reply its re-edification from *within* on the part of the Caucasian, and its imposition from *without* on the Turanian peoples. This, of course, implies the restoration of their normal supremacy to the former, and we may add, the relegation of the latter to their proper condition of inferiority. This, again, implies our return to a positive and spiritual age of edification, wherein religion, language, and "society" will be rebuilt in more than pristine power and beauty from amidst the chaos into which they have fallen in these latter centuries. Thus, then, we are brought back to a consideration of Iran and Turan, their capabilities and their fortunes. And here, to avoid confusion, let it be distinctly understood that by the former we more especially mean the Aryan, and not the Semitic division of the Caucasian peoples; the ethnic relation of the latter, as superior nervous to inferior muscular race, being with the negroid types of the south rather than the Turanians of the north. And of the Aryans we mean the western rather than the eastern branch, having, indeed, increasing doubts whether the latter were ever more than a powerful colonial extension from Europe, and now, like all such colonial extensions of long standing, ethnically effete, at least in India, and apparently waiting for a renewal of western influences, even in Persia.

It must not be supposed that the conflict between Iran and Turan

commenced yesterday, that is, within the historic period. It obviously antedates history. Its echoes reach us through tradition. It pervades mythology. Its battles are the remotest events whereof humanity has preserved the recollection. As Jotuns and Titans the Turanians were defeated. As Huns and Turks they were conquerors. The battlefield once reached from Scandinavia to India; it has now been extended to China and Japan. The rippling waves of Iranian conquest have encircled Peking, and thrown their spray on the walls of Jeddo. Never before probably were the muscular so thoroughly overmatched by the nervous races. Hitherto Turan was comparatively safe in her geographical remoteness, or in the practically impenetrable character of her Tartarean pastures. Navigation has bridged the seas, and the rail ensures a way through the once pathless wilderness. It is not simply the military supremacy of Turan which has departed, but her very independence in the strongholds of distant Mongolia, both nomadic and civilised, is seriously threatened. The great racial movement with which we are cotemporary is not only the emergence of the Iranian, but also the submergence of the Turanian, and that to an extent and degree never before witnessed. In geographical range it was, in all previous ages, an impossibility. In moral force, that is, as an invasion of ideas, it was never equalled. It is not merely the political power of China which is threatened, but her institutions also that are doomed. It is as impossible for her antiquated civilisation to resist the flood of European thought and knowledge, as for her rudely equipped and ill-disciplined troops to oppose the march of European armies. She must learn what we have to teach. She must follow where we lead, as far as her ethnic inability will permit. Her subjection must be complete, her submission entire. Never before was Iran so prepared to give, or Turan to receive, an intellectual baptism of ideas, and we may add, a corresponding material baptism of innervation. But is the action of Iran to be the sole characteristic of her age of impending triumph? Is there to be no reaction on the part of Turan? This demands some farther consideration.

The intellectual classes are unwisely prone to regard things only from their own standpoint. From a new book or a discovery in science, up to a great revolution in philosophy or religion, they feel an enlightened interest in the movements of the world of thought. To a certain extent, also, they seem to comprehend the more immediate bearing of political events. But the less obtrusive, though not less important, processes and results of commerce and industry seem altogether beyond or beneath them. The anthropologist, however, should not share in this superficial disdain. Let us then contemplate the great industrial revolution with which we are cotemporary. Coex-

tensive with the great colonial expansion of the European peoples in the New World, there has been, during the last three centuries, an involuntary diffusion of the inferior negroid type from Africa. This, however, was only possible under conditions which have now ceased, or are everywhere on the point of ceasing. As an emigrant, the negro must be assisted; and when he arrives in the land of his master's adoption he must be coerced, or, as our transatlantic friends used to phrase it, "held to labour." Without the latter condition, he would not have been worth the expense of the former. In liberating the negro, the abolitionists have practically arrested his farther deportation. As a profitable *free* labourer, he is not adequately amenable to *moral* considerations. He needs the constraint of slavery, and the occasional stimulation of corporeal punishment, if he is to prove the paying member of a civilised and industrial community. So at least say and think the practical men who preside over plantations, and who, accordingly, when in want of "hands," resort to Asiatic coolies who will work heartily for a wage, rather than to African negroes who seemingly require a motive more directly personal.

Here, then, is a great industrial revolution in progress, based purely on racial considerations. This matter goes down to far greater depths than the abolitionists suspect. They, inspired by the beneficently communistic spirit of Christianity, and unrestrained by any inconvenient knowledge of races and their diversity, have demanded and obtained the social liberation of the negro, an example which, being afforded by Britain and the United States, cannot fail to be followed, at no remote date, by the remainder of Christendom. The days of negro chattledom are ended, but not so the consequences of this liberation of "our brother in ebony." These have now to be reaped both by him and us. Let it be clearly understood that if the world will have nothing but free labour, it can only be obtained on the condition of having a labourer capable of working steadily and efficiently in a state of liberty. The pure negro never has done this in any age or country. He is a slave at home and he has ever been a slave abroad, from the time of the Pharaohs to the day of his recent emancipation. But the world will not tolerate slavery, and, therefore, however unwelcome this truth may sound in the ears of negrophilists, it will not tolerate the negro.

We all know how important, in its after bearings on the fortunes both of Africa and America, was the first sable cargo that crossed the Atlantic from the former to the latter continent. We, who have seen it in the light of its consequences, know that it would have been almost impossible for its contemporaries to overestimate the prospective significance of that event. It inaugurated a racial revolution, the wholesale transference of an African type to the American shore, with

all the changes and commotions, political and industrial, which have followed, and are still following upon it, from the growing of cotton to the fighting at Chancellorsville—a harvest in which the sword as well as the hoe will have to be concerned, and that has to be reaped on bloody battlefields as well as in swampy rice-grounds. But was the first cargo of Asiatic coolies of less importance? We, of course, are blind to its significance and indifferent to its consequences, as cotemporaries usually are, but it nevertheless equally inaugurated a great racial revolution, the supersession of the inferior African by the superior Turanian labourer of the tropics, and, we may add, of the temperate zone also.

Let us endeavour to understand this matter in such of its more important bearings as are at present discernible. The civilised Turanians of eastern Asia amount, as already remarked, to fully four hundred millions of people, immemorially trained to industrial pursuits, and capable not only of sustained labour but many of them skilful as artisans, and thus fully qualified not only for agricultural but mechanical pursuits. And this vast reservoir of human power is now just breaking through its barriers. The slowly accumulated force not only of centuries but of uncounted millenniums is, apparently for the first time in history, about to be let loose. Can any man measure the depth and extent of the flood which must succeed this grand, and yet under some aspects, terrible disruption of the olden boundaries? The Indian archipelago has received the first instalment. California and Australia writhe under the severe infliction of a few windblown froth-bubbles that but precede the great body of the advancing waters. But virtually this vast racial movement is only now beginning. The real invasion of the labour market, more especially of the New World, has not yet commenced. Not in a few coolie emigrant ships, and just as they are wanted, will the yellow-skinned, flat-faced strangers arrive in straggling and manageable bodies at their new habitat, but in an overwhelming exodus, that will laugh that of the Irish to utter scorn, and derange “wages” and “prices” to an extent now incredible to all “practical men,” and most alarming to all respectable possessors of “vested interests.”

We do not, of course, expect the statesman to see this; “sufficient unto the day is the evil thereof” with him. The negrophilist will of necessity close his eyes to a movement fraught with such dire possibilities to his beloved *protégé*. The merchant and the planter will think it time enough to accommodate themselves to the change when it actually arrives. We need not, however, thus curtain up our horizon for fear of the inevitabilities looming in the distance. Let us then glance at the “providential” preparations for this “coming

event," at the means already in operation for ensuring its unfailing advent.

The disintegrative and revolutionary movement of these latter generations, whose cardinal doctrine is "equality," while it liberated the negro also unsettled the Turanian. The Confederate war and the Taeping rebellion were bipolar results of the same magnetic storm. As effects they were produced by the same cause; as causes, they will co-operate in the production of a common effect—the supersession of the negro by the Turanian throughout the colonial settlements of Europe in the New World. Nor is this the whole prospective result of this impending human deluge. Let us warn our transatlantic brethren of another. Neither the Caucasian nor the negro has much of Ethnic relationship to the Indian aborigine. If the latter has any racial correlate in the Old World it is the Turanian. Nor is this matter for astonishment. The vast unbroken expanses of Tartary and Mongolia find their geographical counterpart, not in peninsular Europe and Western Asia, but in North and South America. The telluric influences which have helped to fashion the Turanian type of man in the Old are obviously not altogether wanting in the New World; and hence, doubtless, a certain observable, though rather remote, resemblance in the result. Practically, this will have to resolve itself into the relative viability of the Caucasian and Turanian on American soil—a problem somewhat difficult of solution now, but for which data, enough and to spare, will be furnished by the future.

This impending military subjugation and industrial liberation of the Turanian peoples, is part of that larger movement, the reduction and colonisation of Asia by Europe, a movement already far advanced, as we see in India and Siberia, and which cannot fail to produce most important effects throughout the entire area of civilisation. For this also agencies have been prepared, which cannot fail to have an especial effect on the social progress, if not ethnic development, of the great race of North-Eastern Asia. Let us enter somewhat more minutely into this matter. As already remarked in a previous paper, the entire civilisation of the world is virtually littoral. This is so from Britain to Japan. It is not only the northern position, but the continental character of Russia, which has placed her in the rear guard of European nations. There are geographical reasons why the shores of the Mediterranean were so early the seat of culture, and have been so historically distinguished, as there are others, of an opposite kind, why Tartary and Nigritia are still the retreats of ethnic rudeness and intellectual barbarism. Any vast extent of continent far removed from the sea has hitherto proved practically impenetrable to the influences productive of civilisation. But, as already observed, the railway is about

to change all this by opening up the interior of Asia and America, and ultimately perhaps of Africa. And this great advance in our appliances for locomotion is cotemporary with the extension of the European peoples over the prairies of America, and precedent to their corresponding extension over the steppes of Central Asia. The geographical isolation of Turania is about to terminate, and whatever therefore were its effects, immediate or remote, must ultimately cease. This opens that great ethnic problem, to which allusion has been already made, the moral culture and material innervation of the Turanian by the Iranian, the grandest racial experiment possible in the present condition of humanity, and which on an equal scale or with similar appliances, has never been previously attempted, although in smaller cycles it must have been a recurrent phenomenon from before the dawn of authentic history, or even the remotest tradition.

And this leads us to that great question, the essential character, and, consequently, the fundamental relationship of Iran and Turan. In her production of organic forms Nature has obviously advanced from lower to higher, from the simpler to the more complex, from the coarser and ruder to the finer and the more beautiful, from the less to the more specialised. Without a miracle this was a necessity. Geology reveals to us that this was the law of progress in the vegetable and animal sphere, and we have no reason to suppose that humanity is, in this respect, at all exceptional. We may conclude, then, that Turan preceded Iran, and that the Mongol is older than the Tartar. For our present purpose this is sufficient. We are not yet prepared to trace humanity to its beginning. Granting the truth of the development hypothesis, the highest ape and the lowest man have long since perished. Nature, if not in haste, is at least decisive in effecting her demarcations. Merely transitional types are especially mortal. The lowest bird is adequately distinguished from the highest reptile; nor is there any possibility of confounding an ostrich with a kangaroo. Humanity is, no doubt, comparatively recent, as an organic advent; but its transitional stages from the bestial realm have everywhere disappeared. The gulf between the highest existing ape and the lowest man is already far too broad for any *saltus* of which unassisted Nature is at all capable. And even were this not so, our Turanian brother, at all events, is not at the bottom of the scale.

What, then, is the Turanian? And we reply, he is the northern, if not absolutely arctic type of man, on the plane of Nature. He is a boreal autochthon, the rudest form of humanity now remaining north of the tropics. He is osseous and muscular, rather than nervous; and, although gifted with a powerful brain, it is basilar rather than coronal in its general contour, affording evidence of an animal

rather than a moral or intellectual nature. He is a son of the soil, rude and unfinished: or, as we say in scientific language, undeveloped. His coarse and unchiseled features are indicative of cerebral convolutions proportionately imperfect. His beardless and infantile face is simply the index of a nature equally immature. Of his aboriginally monosyllabic language, we have the arrested form in existing Chinese. Among tribes less fixed and fossilised this imperfect lingual medium which, sooth to say, is simply the language of the nursery, has become agglutinated; but it is nowhere grandly inflectional like the more sonorous tongue of the high caste Caucasian, now, alas, for the most part lost in the ethnic and social confusion incident to the late military triumph of the muscular and collapse of the nervous races.

But this being, so organically and mentally infantile, nevertheless presents us with the extraordinary and rather inexplicable spectacle of an almost immemorial civilisation, and this, too, developed amidst the ruder, that is, the Mongolic type of his family. That snub-nosed, yellow-faced, skew-eyed creature, who provides us with tea and takes our opium, and who was dressed in silks when the Romans landed in Britain, presents the anthropologist with an ethnic problem, whose difficulty of solution rather increases than diminishes with his knowledge of race. Here is a pre-historic civilisation existing at a remote corner of the world, out of the great highway of events, and having so many distinctive specialities, as to indicate that it must be largely of home growth, and yet its subjects are Mongols, whose language, lineage, and type, indicate a decided ethnic inferiority to those Tartar nomads whom we have been accustomed to regard as almost irreclaimable barbarians.

And here we are brought face to face with another great racial problem, namely, the ethnic relationship of civilisation. Formerly it was regarded as altogether and essentially a thing of art, the almost unnatural product of a forced culture. And this idea still lingers in the literary, if not the scientific mind. "The noble savage" of Rousseau has not yet been quite exorcised. Many of our leading and influential writers, historians like Buckle and logicians like John Stuart Mill, obviously think that civilisation is wholly the product of circumstances. The anthropologist, however, knows that there are savage races, the irreclaimable children of the wilderness; and there is increasing evidence that these ruder types once occupied a much wider area in the world than they now do. It is also obvious that the day of their approaching extinction is measurable, if not by decades, at least by centuries. We are in many ways on the verge of an ethnic crisis. The inevitable, if not virtually accomplished re-emergence of the nervous races, has bearings not merely on the



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1. Arab.—2. Camel.—3. Dr. Beecher.—4. Lion.—5. A Bearish Fellow.—6. Bear (Redfield).—7. Vital-motive Temperament.—8. Vital-mental Temperament.—9. Mental-vital.—10. Motive-mental.—11. Hanie Thomas, Assyrian Woman (see p. lxi).—12. Vital-motive-mental.

nomadic Turanian, but also on the savage Indian. If a progressive humanity needs the pastures of the former, it also demands the hunting grounds of the latter, and has perhaps very properly commenced with these, as a preliminary measure. But if there be savage races absolutely incapable of civilisation, does it not follow that there must also be barbarous races qualified for it only in a limited measure—and is not the Turanian one of these?

[To be continued.]

PHYSIOGNOMY.*

THE external appearance of men and things has influenced men in all ages and nations; it has gone further, it receives the attention even of the lower animals. What man does not experience currents of attraction and repulsion on grounds wholly physiognomical? The infant in arms, even, is a most unprejudiced witness to the truth of physiognomy. Man's aspect, the physiognomical sensation he excites, is an important adjunct to his executive over lower forms of life. His fierce glance may make the lion quail; his tender accents invite to his bosom the timid and gentle dove; and even in that lower division of the organic empire, the vegetable kingdom, physiognomy is true to the trust which nature has bestowed on her.

How is physiognomy received by man? In infancy and savage life he is its servant, and notwithstanding all the dissimulation which artifice and artificial life heap upon him, he is unable to escape from its influence. The earliest writers on science were deeply impressed with the truth of physiognomy, as were their forerunners—the prophets, poets, and historians. The Old Testament is a vast essay on physiognomy, for there the external prefigures the characteristics of the internal. But we do not know of any attempt to arrange these ancient observations in a scientific manner. The mind of Solomon, if we are to consider him the author of the Book of Proverbs, was highly physiognomical. Thus he says, “as the north wind driveth away rain, so doth an angry countenance a backbiting tongue”—Prov. xxv,

* 1. Napier, *Miscellanea Anthropologica*. London and Bristol, 1868. 2. *Porta de Humana Physiognomia*. 8vo, Francof, 1618. 3. Lavater, *Essays on Physiognomy*. 5 vols. 4to, London, 1810; also 8vo, London, 1860. 4. George Combe, *Elements of Phrenology*. 5. D'Arpentigny on the Hand, translated by Beamish. 6. Carus, *Symbolik der menschlichen Gestalt*. Leipzig, 1853. 7. Fowler, *Practical Phrenology*. New York, 1851. 8. Fowler, *Self-Instructor on Phrenology*. London, n.d. 9. *Notes on Noses*. London, 1857. 10. Redfield, *Comparative Physiognomy, or Resemblances between Man and Animals*. 11. *Aristotle's Works*, translated by Taylor. 10 vols. 4to, 1812.

23. "A naughty person, a wicked man, walketh with a froward mouth. He winketh with his eyes; he speaketh with his feet; he teacheth with his fingers"—vii, 12, 13.

Aristotle, the master-spirit of Greek science, in his extensive researches in natural history, made many observations on the physiognomical indications of men and animals. He noticed the resemblance between men and animals, and that certain peculiarities were significant of mental characteristics in each. According to him,—

"Weak hair betokens fear, and strong hair courage. The most fearful of beasts are the deer, the hare, and the sheep; the hair of these is weaker than that of other beasts. The lion and wild boar, on the contrary, are the most courageous; they have extremely strong hair. Beasts remarkable for their courage simply give their voices vent without any great restraint, while fearful beasts utter vehement sounds. Compare the lion, ox, and barking dog, which are courageous, to the deer and the hare."

The truth of some of these remarks is too evident to require comment, but others betray great carelessness; and all want that nicety and keen observation which can alone give value to physiognomical description.

We have to thank Mr. Redfield for a very extraordinary and original work, which if not a contribution to exact science, still is to sound knowledge, and an opening to a world which will be new to many of us, although his book is founded on observations and analogies which the acute in all ages have perceived. *Comparative Physiognomy, or the Resemblance between Man and Animals*, is the title of the book. With but little system, the author proceeds to give many examples of resemblances in form and character: thus, we have beasts, birds, reptiles and fishes, and their human prototypes. His work is illustrated by a large series of expressive woodcuts, which we wish we could quote as easily as his words; but not to leave our readers in the dark altogether, we have copied some of them to illustrate the author. No description can give an adequate idea of the merits of the book: buy it, reader, and judge for yourself.

The Germans, he says, resemble lions; and John Jacob Astor's portrait is placed beside that of one of these animals, and the resemblance is very striking. There is great variety in the countenances of lions; humour as well as natural disposition has much to do with this. Some men are like the lion rampant; others like the lion passant; and others, again, like the lion dormant.

An aquiline nose is proverbial and generally accompanies soaring qualities; as the type of this Mr. Redfield exhibits a portrait of Maximilian, Emperor of Germany. He says of the owl—

"The ogling and staring which are so characteristic of the owl are

no less conspicuous in those who resemble him. The trait exhibits itself in a love of raree shows, and inclines its possessors to the profession of showmen. They take it for granted that what they themselves are most fond of there must be a demand for, and thus they kill two birds with one stone, stare all the time at wonderful sights which they are exceedingly fond of doing, and make money by exhibiting to others. They have no idea of people being so stupid as not to appreciate them."

A portrait is exhibited which is very like Mr. Barnum, and an owl's eye is well depicted here. He also says—

"The owl has dignity; he has no notion of being put out of countenance, he fancies that all the birds of the forest have come to see him, therefore he stands stock still. He sits in judgment on others, is the severest, and in his own estimation the wisest of critics. As wise as an owl is a proverb which places him on a level with Solomon, whose fondness for collecting all the strange and wonderful sights in nature and art furnished him with knowledge and made him the wiser."

This crudely written passage is a somewhat fair specimen of Mr. Redfield's style. He is a deeper student of nature than of books, as is common with the Yankee school. Why was the owl associated by the ancient Greeks with Minerva, the goddess of wisdom? They were surely too close observers of characters to do so without an object. Many of the resemblances mentioned by Mr. Redfield appear ludicrous in type, but this is not the case when we come to compare the forms, as for instance that of the stork and Captain Cooke. There is clearly a resemblance in character; they are both fond of exploring, and both have an air of serious earnestness.

"The person who resembles the mouse," he continues, "has tendencies towards refinement and elevation, while the one who resembles the rat has none. The one aspires, ransacks drawers and closets, and burrows himself in books and papers in garrets, gleans knowledge from every source, finds profit in living alone, and 'all the bread and cheese he has he lays on a shelf.' The other sinks in the mire of corruption, delves in filthy lucre, and has no disposition to rise, except on the heaps that he can accumulate."

For our own part we do not see why the mouse—that is the domestic species (*Mus musculus*)—is not rather less noble than the rat. Their powers of doing mischief appear about proportionate to their size. Our author has here also fallen into a fog, in which in the general dimness of vision he has confused man and beast—that is the type and the object illustrated. Rats are bad enough, but Mr. Redfield does not prove that they delve for filthy lucre. We suppose he means their human prototypes; and if so he is right. He enters at great length into the resemblance between men, nations, and classes and various animals, devoting a chapter or two to each. One of his most striking resemblances is that between the Arab and camel. He says—

"The camel and the Arab carry their heads erect and high, their sight and hearing are wonderfully acute; their faces are thin, and their bodies are always lean. Their eyes are sunken, their eyebrows projecting. They have high cheek bones, Roman noses, straight hair, and countenances of uncommon gravity. But there are shades of expression and feature that constitute the particular resemblance between them, as is evident on comparing their likeness. Looking at the face of a camel, one would suppose that the person who resembled him would never smile; and the Arab, instead of smiling, when he greets a friend, looks grave and solemn. There is something in the attitude of the camel that reminds us of the Arab salutation—placing the right hand on the breast, and then on the forehead, and saying, 'Peace be with you.'"

The endurance of the camel, its stability, the scanty and coarse food which it enjoys, are no less remarkable in the Arab. This chapter of Mr. Redfield's is beautifully true.

He also notices the resemblance between bulls and oxen and Englishmen, and the cows with Englishwomen. He says:—

"The ox is the very impersonation of repulsiveness, indicated in the size and strength of the spinal marrow, and by the extraordinary strength imparted to the muscles of the back. Emerson says of the Englishman 'that the axis of his eyes is united to his backbone.' We understand by this that he is quick to see whatever he does not like; that the eyes are the sentinels of his repulsiveness, and that with repulsiveness he guards his eyes."

The same shrewd observer says:—

"The Englishman is remarkable for his pluck. He shews you that he means to have his rights respected. He knows what he wants, and he means to have it. He is sure to let it be known if he is not served to his mind. Still, he is not quarrelsome. Among the twelve hundred young men at Oxford a duel was never known to take place. His self-possession is not pugnacity; he does not injure others, he is thinking only of himself. This is a description to the very life. Even the mad bull has not animosity or desire to injure anybody; he only wishes to gratify his headlong disposition, the instinct which is in his horns."

The Russian bear is a proverb; for this Mr. Redfield would substitute Yankee bear. There is a great resemblance between the profiles of men and bears given by him. Awkwardness and savage ferocity characteristic of bruin are common enough in America; but except the bear's love of its whelps we do not see much to admire in its disposition. One of the most striking of Mr. Redfield's comparative illustrations is that of the Esquimaux woman and Esquimaux dog, which is another instance of the resemblance between the human and quadruped inhabitants of a country. Mr. Redfield is much more discriminate than previous writers on this subject, of whom the principal, Porta, is led into many groundless fancies. The engravings of the latter are

too coarse precisely to illustrate his subject ; yet even here the truth of the general facts adduced must be evident to every careful observer. The principal value of such comparative physiognomy consists in the facilities we have for its observation, for no measurements are required. But small portions of the man, while they present these attractions, are open to the charge which cannot be justly brought against phrenology,—that of leading to loose conclusions. But even this is sufficient to establish great principles. We rather wonder at shrewd Mr. Redfield not bringing forward any. He does not tell us *why* man resembles animals. He is not a Darwinian, bent on discovering in these resemblances, traces of a former infantine state of existence ; neither does he use arguments similar to those of the Yorkshireman, who, attending a meeting of the Anthropological Society, said he did not much understand what was said, but thought that the speakers traced man's origin from monkeys, and that he thought "they were going as fast as possible back to where they came from."

It has not occurred to him that man is the "microcosm"—the epitome or axis of creation, and that in the words of Leo Grindon,

"When the features of the monkey, the sheep, the bull, supplant, as we often see them, those of the proper human countenance, when the mildness of the dove, the cunning of the snake, the stupidity of the ass paint themselves on the physiognomy of our fellows, it is because in man they are all essentially contained ; and, though their normal and complete realisation is outside him, are yet competent to look forth from the windows."*

Mr. Groom Napier has expressed these views in his *Miscellanea Anthropologica*, and believes that the illustrations of man which are to be found in every department of nature, prove him to be her epitome.

"We are all physiognomists," is a common expression, but how few of us can describe accurately what we feel, and on what we more or less act ; but false decisions are more common than true ones. Why then teach physiognomy at all ? The universality of its application and its incessant practice call imperiously for an instructor. The just interpretation of physiognomy is thus but little diffused, yet it is a language older than the builders of Babel, which has survived the mightiest conflicts of men and things. Would that a great knowledge of it was more extensive ; a smattering—the parent of all deep knowledge—is widely diffused. The greatest delineators, painters, and sculptors, are those who have the truest knowledge of physiognomical indications. Writers in every department of nature greatly owe their success to their skill in physiognomy. The fire which burns in the characters of Shakspeare, Homer, Milton, Byron, or Dickens, would be quenched without the significant description of their external forms.

* *Life*, 350, Ed. 1857.

If this is necessary to the creation of a hero of fiction, how much more will it be so if we are to be brought face to face with men who have once lived but of whom we have now no records or literary remains? The characters of Aristophanes and those of many of the Greek dramatists are eminently indebted to physiognomical illustration. The greatest writers, as well as the greatest artists, are those who most preserve the characters—the mere salient points of the frame are not sufficient. Thus plaster casts generally lack the animation of life, and without a vivid appreciation of its reality, the artist, though he wield the tools of a Phidias or a Raphael, produces but a lifeless model.

Physiognomy is divisible into two grand divisions: the moveable and the immoveable, which have been called the anatomy of expression and form. The first most expresses the passing emotions; the second, the original traits of character. Artists should pay equal attention to both; for the delineation of a countenance, even if it give its current expression, is defective if it does not afford a true view of the great outline. Photography in this resembles graphic art. The artist can teach us more of physiognomy than any class of observers. The most distinguished observers of men, those who have the keenest insight into their characters, either avowedly or unconsciously, pay most attention to physiognomical indications.

Physiognomists have been often induced by too exclusive study of portions of the body to think that these alone are indicative of character. The structure of all parts is significant, but of varying importance. That of the head is of the greatest importance. It is as it were the *director of the body*, which speaks on behalf of the members. Natural language, or physiognomy of motion, is a subject of great importance; without it there can be no oratory—it is the science of GESTURE.

We will first consider the temperaments, as pointing to the characteristics of mind indicated by the body. Aristotle, and Galen the eminent Roman physician, were among the earliest writers on this subject, and much is said about it by Huart, Behmen, Lawatz, Haller, Zimmerman, Kämpf, Oberreit, and Lavater. Lavater considered that there were four temperaments: the choleric, the phlegmatic, the sanguine, and the melancholic. These had their prototypes in the four elements of the ancient philosophers: the choleric, of fire; the phlegmatic, of water; the sanguine, of air; and the melancholic, of earth.

Gall, Spurzheim, and George Combe,* devoting much attention to external indications of character, were dissatisfied with the diagnosis which the older writers had given of the temperaments. The latter's

* *Essays on Physiognomy*, p. 328.

clear definition of them is to a great extent excellent, but the nomenclature is less precise than that of Fowler. Combe objected to the choleric temperament entirely as separate and primitive; it answers to what he terms the bilious-sanguine.

Fowler's objection to the old nomenclature of the temperaments was on the ground that it was prone to be misunderstood. Thus he says :—"Sanguine is mistaken for buoyancy of spirits; bilious for a tendency to bilious diseases; and nervous for a derangement of the nervous system." But it must be admitted that there is a certain connection between those classes of complaints and the temperaments named; although these names *may* sometimes lead to false conclusions from their pointing to diseased rather than to healthy tendencies. Thus the diseases of the individuals of the bilious temperament are mostly connected with the liver, stomach, and intestines; those of the sanguineous with the circulation; and those of the nervous with the nerves and brain.

Fowler considers that the temperament is more influenced by the build and shape of the body than by the colour of the eyes, hair, or skin, in which he is no doubt greatly supported by facts. In accordance with his views, he has adopted a new nomenclature for the temperaments, suppressing one, the lymphatic, entirely. His diagnosis is briefly thus :—First, "the vital temperament, or nutritious apparatus. This embraces those organs occupied in manufacturing vitality and in creating and sustaining animal life, namely, the digestive apparatus, the heart, lungs, blood, viscera, etc. This corresponds in part to the sanguine and lymphatic temperaments."

Second, the motive apparatus: this includes the bones and muscles which constitute the frame-work of the system, and corresponds with the bilious temperament.

Third, the mental apparatus: this embraces the brain and nervous system, which are the instruments employed in the production of thought and feeling, and is similar to the nervous temperament. These views were first published by Mr. Fowler in 1839, and he has not, he tells us, seen any occasion to change them.

As every individual possesses the entire series of vital organs and systems of the body, so must he all the various temperaments which accordingly modify one another. Fowler goes on to describe the indications of the temperaments: thus

"The vital is known by a stout, thick-set build; a capacious chest; arms far apart; well set back; well developed abdomen; full strong pulse; large strong lungs and voice; short, round, well set teeth; plump person; abundant,—often curly hair; active and vigorous cir-

culatation and capacity for enduring fatigue, privation and exposure. A great love of physical action, fresh air and out-door employment, though not hard work. The hair is red, sandy or chestnut ; the face flushed or suffused with blood. Persons in whom this temperament predominates show their talents in business, management, and natural shrewdness, more than in hard steady reasoning, or fondness for books. The motive temperament is similarly indicated by a spare person usually of good height and athletic build ; by strongly-marked features, as a high Roman nose and large cheek bones ; large, broad front teeth, and all the bones of the body large and projecting. A deep bass voice ; distinctly marked blood-vessels ; large joints ; hard flesh ; great muscular power ; ease of action and love of physical labour. Dark, coarse, stiff, abundant hair ; black and heavy beard ; dark skin and eyes ; strong, but coarse feelings, and much energy of character."

"The mental temperament, when it greatly predominates, is characterised physically by a small stature, light build, small bones and muscles, great physical activity,—too much for his strength ; sharp features ; thin lips ; small pointed nose ; teeth sharp, and liable to early decay ; all the bones pointed ; head usually uneven ; voice shrill and high-keyed, and its intonation evincing fervour and tenderness ; the hair light, fine and thin ; a fine, clear, soft and delicate skin ; extreme sensitiveness to physical suffering ; a keen, light, intelligent and sparkling eye ; a speaking countenance, indicating sensibility ; a narrow chest, abdomen and shoulders. He will be mentally characterised by a predominance of mind over body, so that its state will affect that of the body more than that of the body will the mind. He will be in the highest degree susceptible to the influence of stimuli ; be refined and delicate in feeling and expression ; will enjoy in the highest degree and suffer with equal intensity ; will be fond of reading and study ; of thinking and reasoning, of books and literary pursuits."

Mr. Fowler, with little literary ability, shows evidence of great practical acquaintance with his subject, and a minute and extended observation of men mentally and physically ; which is as rare as it is necessary to one who attempts to write to any purpose on temperament. To him as well as to his predecessor, Dr. Caldwell, the physiologist is really much indebted. Mr. Fowler's descriptions of the principal combinations of the temperaments is not less worthy of extract. Of the vital motive temperament he says :—

"One having this temperament predominating will be of good size and height, if not large ; well proportioned ; broad shouldered ; muscular ; nose and cheek bones prominent ; visage strongly marked ; features often coarse and homely ; countenance often stern and harsh ; face red ; hair red or sandy, if not coarse, and movements strong, but often awkward and seldom polished. He will be best adapted to some laborious occupation, and enjoy hard work more than books or literary pursuits ; have great power of feeling, and thus require much self-government ; possess more talent than he exhibits to others ;

manifest his mind more in his business ; in creating resources and managing matters than in literary pursuits or mind as such, and improve with age, growing better and more intellectual as he grows older.

These remarks are singularly just. We could instance many persons ourselves that have the same qualities and physical aspect. Fowler says also of the motive-mental temperament :—

“One having this temperament with the motive predominant and the vital average or full, will be of good size, rather tall and slim, lean and raw-boned, if not homely and awkward ; poor in flesh ; bones and features prominent,—particularly the nose ; have firm and distinct muscles and a good physical organisation ; a keen, penetrating eye ; the front upper teeth rather large and projecting ; the hands, fingers, and limbs all long ; a long face and often a high forehead ; a firm, rapid, energetic walk, and a great ease of action. He will have strong desires and much energy of character. Will take hold of his projects with both hands, and drive forward in spite of obstacles. His talents are more solid than brilliant.

“The vital-mental temperament when predominant, with the motive moderate or small, will have a double augmentation of fervid feeling. Of animal feeling from his vital and of elevated from his mental apparatus : being hardly able to contain himself, such will be their intensity. This flow of sympathy will be great, so that he will easily receive and communicate impressions, and be too much influenced by his impulses. Will use strong and hyperbolical expressions ; be fond of company ; have a quick, clear, sharp, active mind, and good business talents ; a ready flow of ideas, and a talent for communicating them, either on paper or in conversation. Will have an undercurrent of pure, virtuous feeling, which will prevent the grosser manifestation of animal passion, and give the intellectual and moral man the ascendancy. He will be fond of reading, particularly poetry ; he will have enough of selfishness to take care of number one, yet not enough of power of character to become great or permanent. This is the eloquent temperament and also the poetical ; though in fact the mental often predominates over both the others. In singers it often predominates though the vital generally assumes the lead, giving both the love of music and a powerful voice. Its predominance is indicated by small bones, moderate stature, light and thin hair and eyes ; rather thick-set build ; round shoulders ; full chest ; full face ; handsome figure ; genteel address ; small, short, and sharp nose ; a sprightly walk ; considerable colour in the cheeks and face, and that exquisiteness of feeling which enjoys and suffers in the extreme.”

Mr. Fowler has here been carried away by the influence of this temperament himself ; for, even by his own shewing, this description includes rather too much. He forgets to tell us the qualities of mind ; or, as he would say, phrenological organisation which accompanies this temperament. He says :—

“The best temperament—the one most favourable to true great-

ness and general genius, for balance and consistency of character and for perfection in everything, is that in which each is strongly marked and all equally balanced. If there is too much motive there is power, but nothing to rouse it to effort. Does the vital motive predominate over the mental, there is physical power and enjoyment, but too little sensibility and intellectuality.* If the mental predominate, there is too much mind and sensibility for the body; too much feeling, and that too exquisite for this coarse world, together with a greenhouse precocity and too much sentimentalism and refinement."

A little more care on the part of Mr. Fowler would save us the rather unpleasant task of finding fault with a very sensible writer, who, as he says himself, is more solid than brilliant.

The proportionate combination in physiology and phrenology, as in chemistry, is all important; it has a varied action in this relation; but its analysis is complex and difficult.

We will say a few words on the popular acceptation of the term physiognomy, or character, as indicated in the features of the face. Lavater, the most distinguished of physiognomists, in his great work, has given many portraits, and many notes on their significance; but system here also is sadly wanting. Is it in the inherent difficulty of the subject? We think so. The key is to be found only in the immovable skull, as Lavater has himself most justly observed, in which he confesses his ignorance as well as his faith:—

"I blush when I think how much I ought to know and of how much I am ignorant, while writing on a part of the body of man which is superior to all that science has yet discovered; to all belief; to all conception. It must have been already remarked that I take the system of the bones as the great outlines of man; the skull as the principal part of that system; that I consider what is added almost as the colouring of this drawing; that I pay more attention to the form and arching of the skull, as far as I am acquainted with it than all my predecessors; and that I have considered this most firm, unchangeable, and far best defined part of the human body as the foundation of the science of physiognomy."†

Lavater justly discerned the importance of the skull as the primary indicator of character, but dwelt less on it, from the reason given above, than on the features of the face.

One of the most common causes of the failure of those who profess skill in physiognomy, is in the attempt to trace the entire character in a single feature, to the neglect of others. Of this we have an example in an interesting work entitled *Notes on Noses*. The nose has surely much physiognomical significance; but it is unwise to take it apart from the other features, except for purposes of analysis. A

* Fowler's *Practical Phren.*, p. 18.

† *Essays*, p. 233, 8vo.

Roman nose, according to the book we have just quoted, signifies great vigour of character and a commanding mind, and a considerable number of instances are given in which this form and character are combined. But if we look round on our acquaintances, we have no difficulty in finding those with Roman noses who are by no means fit to command. A Roman nose must be combined with firm and strictly controllable lips, broad eyelids, and a long or broad chin, if a hero is indicated. These physiognomical accompaniments of the Roman nose will be found in most of the portraits quoted by our author. The "Roman nose" expresses but the domineering tendency. The ideal "Greek nose" could never have been characteristic of any nation, as it exists only in marble or plaster; but this does not invalidate the truth of what the author desires to point out—that a straight nose, nearly on a line with the forehead, often accompanies a taste for literature and the fine arts. But a straight nose without a powerfully developed eyebrow, strictly controllable lips, and a chin such as we have before described, may be found in a weak insipid character.

The "Jewish or hawk nose," also, does not indicate what our author considers characteristic, without features in harmony.

The "cogitative nose" is very generally found in great thinkers; but we have also seen it in shallow thinkers: it requires to be under a powerful forehead. Shortness of temper and rapid flashes of thought we have observed accompany a "cogitative nose."

No work on physiognomy has anything like the value of Lavater's. His plates, engraved by the illustrious Holloway, are the best extant. We can *feel*, but we have infinite difficulty in describing the significance of mouth. Full lips indicate the predominance of the feelings over the intellectual organs, as in the negro race. But the prognathous jaw, be it Celtic or negro, is equally significant of a deficiency of controlling power. Thin lips, on the contrary, express in their varieties meanness, avarice, insipidity or deficient sensibility. Lavater says fleshy lips have always a struggle to maintain with sensuality and indolence. Among the thinner lips, the best marked forms are the large, thin, undrawn lips of the dry, passionless man of intellect; the soft and beautifully chiselled in those of refined sense and poetic nature; the tense and strongly marked in strong-willed men of practical ability; the lean and hard-lined in the timid and avaricious. We have given the sense, not the language of Lavater.*

A large eye is the common accompaniment of sensibility, and a small eye of the reverse. Round eyes generally accompany philosophical and inquiring minds, with openness of character. We do not say they *always* indicate them. Lavater says "deep, small, sharply

* Vol. iii, p. 397.

delineated, dull, blue eyes, under a bony almost perpendicular forehead, which in the lower part sinks somewhat inwards and above is conspicuously rounded, are never to be observed in penetrating and wise, but generally in proud, suspicious, harsh, and cold-hearted characters." This is commonly true: Lavater is happy in his remarks on eyes.

The physiognomy of the hand—chirognomy—has been well treated by D'Arpentigny, whose work has been translated by Mr. Beamish. He divides hands into six, while Carus, an intelligent German writer, divides them into four only. The elemental hand is long, broad in the metacarpal part, palm thick and hard, the fingers short, thick, and squared at the ends, the thumb stumpy, the nails short, strong, and hard, indicate a coarse character, a mind slowly developed, with coarse and dull feelings. This sort of hand is found amongst those indifferent to literature, the fine arts, and the noble and elevated. It is most common amongst the lower classes, but in the upper it still points to a gross mind.

The motor hand is distinguished by its size, strength, prominence of joints and muscles. The palm is nearly square, the fingers longer than in the first-named hand, but stronger, the thumb especially, and with a full ball. The nails are large, long, and quadrangular; the skin of the back commonly firm and strong. This hand is found in great workers and prime movers; it expresses a good deal of the motive temperament.

The sensitive hand is small and delicate, oval in the palm, with the fingers tapering, and nails fine grained and elastic. They are most common in women, but are found amongst refined and well educated men.

The psychical hand "is of moderate size, the palm is a little longer than broad, never much furrowed or folded, but marked with single large lines. The fingers are fine, slender, and rather elongated, their joints are never prominent; their tips are rather long, slender, and delicately rounded, and they have fine nails of a similar shape. The thumb is slender, well formed, and only moderately long. The skin of the whole hand is delicate, and even in man has but very little hair." From this description it will be seen that this is the most beautiful of hands, and, according to D'Arpentigny, points to minds as rare as they are. According to Carus, to "a peculiar purity and interior grandeur of feeling, combined with simple clearness in knowledge and in will." D'Arpentigny says they are most frequent in Asia, and Carus among English women of the higher ranks.

The foot is equally significant, and is classed by Carus in a similar manner; but our limits will not permit us to do more than in general

terms to confirm from observation the truth of the foot's significance of character.

But the analysis of the temperaments, or of the physiognomy of the noses or the hands, appears clumsy in comparison with the system of phrenology which, originally started by Gall, lost many of its crudities and none of its truths in the hands of Spurzheim, who may be said to have given the facts collected by Gall a scientific arrangement, and to have supplemented them by many of his own. Gall and Spurzheim first agreed and then they differed ; but finally the difference between them was very slight.

George Combe, one of the most distinguished writers and thinkers of the present century, becoming attached to this new branch of science, brought the energies of a Scotch practical mind to bear on it, and succeeded in so far perfecting the system that few changes, and those of very subordinate detail, have been thought necessary even by its latest cultivators. Combe and his followers have been accused of saying that the phrenological organisation is one thing and the temperament another—that is to say, that a given phrenological organisation may be found with several combinations of temperament. This supposed error or inconsistency has no foundation whatever ; for from the early days of the science the influence of the temperament or physical man was held to be a most important consideration in determining his mental powers. We have heard two arguments adduced. The first supposes that the temperaments are distinct from the phrenological developments, and the second that the temperament is entirely included in them, if it has not altogether an ideal existence. These theories are both in part true. Thus the temperament, while it modifies the phrenological organisation, points more or less to it—affording one more of those many paradoxes which interlace the principles of science. It is probable such will only be the case in the present infantine condition of man ; and that in the days of his manhood every feature of his frame, and every function of his mind, will thrill in harmony. The discord which we now see will thus not last for ever ; he is now like an unstrung lyre, once vocal with the praises of his Maker.

It is only the most narrow-minded advocates of the phrenological system who confine their attention exclusively to the head or the skull ; neither Spurzheim, Combe or Fowler have fallen into this error ; they are all *great physiognomists*.

Phrenology may be accepted or rejected, but at best it is but a branch of physiognomy, although, if true, it occupies a position in moral science similar to that of chemistry in physical science ; both analyse and treat of the combination of elements ; both treat of these

processes — the main springs of worlds. It has been the fashion amongst some writers to speak of phrenology as an assumption ; but no science appeals so much to facts, and none whose theories are more their legitimate offspring. It is the adversaries of the science who in general are afraid of facts, and who repeat with a most scrupulous correctness arguments that they have learned by heart. Dr. Hunt, in his farewell address, 1867 (*Jour. Anthro.*, p. 66), says,— “ The fundamental doctrine of phrenology, or more correctly cerebral physiology, is the localisation of the functions of the brain. This is a very rational *à priori* assumption ; such a hypothesis explains mental phenomena as well, perhaps better, than any other assumption.” Dr. Hunt has told us a great truth here ; “ phrenology explains mental phenomena better than any other *assumption*.” He might as well have said, better than any other system of philosophy. But is phrenology an assumption ? Is not the capacity of the skull the calibre of the individual ? We have now to do with form ; the question of bumps is but a subordinate one. The various classes of faculties which are grouped together in different parts of the head give to it a great variety of form. Is not this significant of character ? Contrast the head of a malefactor with that of a moral philosopher. The “ villainously low forehead,” in spite of the affirmations of some theorists, will, to the majority of mankind, point to a villanous disposition—as the lofty forehead will to an elevated disposition,—a rational sequence. The phrenologists have therefore the support of public opinion when they consider that a high head indicates high qualities. The phrenologist believes the intellectual faculties to be located in the front of the head, namely from the external corner of the orbit of the eye to the zygoma from which a curve is described to the centre of the commencement of the rise of the head ; this is usually called the forehead. The hair is often thus bounded, but its limits are no sure guide for the location of organs. Compare this portion of the head in an idiot with a philosopher ; it will be found to determine the degree of intelligence of each, as well as the innumerable gradations between them in form and character.

The intellectual faculties are divisible according to Combe into three: the observing, the semi-perceptive, and the reflective faculties. Of the first, called the observing, Fowler says—

“ These store the mind with individual facts, furnish a general knowledge of things, conditions, and qualities, create the desire and talent proportionate to their size for observing and knowing, and thus render very great assistance in doing every kind of business ; they are located directly about the eyes, their principal medium of communication with the external world, and when large or very large, cause the lower portion of the forehead above the eyes to protrude.”

"The semi-perceptive faculties are intermediate between those which perceive objects and their physical qualities, and those which comprehend the abstract relation to things, and have to do with a class of facts which are not necessarily of a physical character. They are located in the middle of the forehead, intermediate in position between the observing and reasoning faculties. The reflective or reasoning faculties form ideas, reason, superintend the operation of the other faculties, perceive abstract and metaphysical relations, the connection between cause and effect, proposition and inference, discover truth and absurdity. They are located in the superior and frontal portion of the forehead. Where they are large or very large the upper portion of the forehead is high, broad and deep as well as prominent. The domestic propensities are placed at the back of the head, above and on the side of the occipital process. They are larger in female than in male animals."

Of these Mr. Fowler says—

"These constitute man a gregarious animal, lay the foundation of his civil institutions, make him a social and domestic being, create his family attachments and relations, have a direct reference to the married state, and originate most of its duties, its relations and its pleasures."*

The selfish propensities, according to the same writer—

"Provide for the animal wants, have a direct reference to the necessities, desires and gratification of the person possessing them, and terminate upon his interests, wants, and happiness. They are located upon the sides of the head, around the ears, and when large or very large, give it a thick and rounded appearance, and make the sides of the head spherical; but when moderate or small, the head is thinner and more flattened in this region."

From the term selfish being used, it must not be supposed that these faculties have necessarily an immoral tendency, such as is quite the reverse, for we see many instances of individuals in whom the qualities of mind here referred to are moderate or small, who propose measures which are not in accordance with the interests of mankind—of this Robert Owen and Jaup, unselfish men, are good examples. The selfish sentiments are located higher in the head, adjoining the moral faculties, and are called firmness, cautiousness, approbateness, and self-esteem.

"These, like the selfish propensities, terminate upon their possessor, and disposing him to seek his own interests and happiness make him selfish, yet their character and manifestation are far superior to those of the selfish propensities, especially when the religious and reasoning faculties are strong."

We are not quite sure whether the term selfish propensities should not by rights include these last named.

* *Practical Phrenology*, p. 46.

It is a very profitable inquiry how far psychological phrenology is true, but our limits will not permit its discussion at length. It is a more favourite subject with the opponents of the science than practical phrenology, who are prone to ask : How can the mind—a unity—be divisible into a variety of faculties? A hypothesis no more unreasonable than that which accepts the body as a unity, consisting of many members. We have yet to see an able essay on this subject, in which the unity and diversity of man's mind is established ; its author will be indebted to the thanks of posterity, for sooner or later the world in general will become as awake to the importance of knowing the main-springs of mental as of material mechanism. That the study of phrenology will eventually have much to do with this, we have no doubt. A writer in Maunders's *Scientific and Literary Treasury* says :—

“Were phrenology an established science, and were it possible to draw unerring deductions from the data it lays down, its discovery would be the greatest step ever made in mental philosophy, and its application the most beneficial ever used for the amelioration of the human race. By disclosing individual character, it would give security to social intercourse, and make communication prompt and easy. It would disclose real merit and expose unworthiness. The truly wise and good would at last attain their proper elevation in society, while the ignorant and vicious would be obliged to hide their diminished heads.” (P. 576.)

The intelligent author of these remarks is willing to give more importance to phrenology than its warmest advocates ; he argues as if the study of it will change the nature of man : a very improbable result. It is at best an agent, not a prime mover. Mankind, unfortunately for themselves, have always bitterly opposed the progress of truth ; it has only triumphed by virtue of its immortality. The miserable men who opposed phrenology, with sophisms or lies, are now forgotten, but the science grows,—stunted perhaps, but still young ; cultivated by all classes in every town of Europe and of the United States.

The progress of truth may be retarded, but it cannot be stemmed ; crushed by the force of despotic opinion, it may for a time retire, till the pressure relaxes, worn out by its own efforts. Democracy, banished from the England of the Stuarts, found a fertile field ; and phrenology, an exile from the thresholds of the schools, found a refuge and a home in America, and their growth has been such as we might expect on a virgin soil.

Professor Bain in his elaborate work on the study of character, has got into the same position with Combe as Festus was with St. Paul ; he is almost persuaded to accept a great truth, but lacks the courage, or the candour to avow a hearty acceptance of it. He believes, but he trembles. Dr. Carpenter, again, after laboured attempts to refute

phrenology, ends by localising distinct mental phenomena in the brain. He may be right, but the truth of phrenology does not necessarily depend on such a demonstration; it is based on the physiognomy of the skull, interpreted by the thoughts and actions of men. Statistics from these coincident points of vision, when applied in a sufficient number of cases, must establish the truth or falsity of the science. When man's skull is transparent, we may hope to read upon his palpitating brain, his past, present, and future. It is but little we can ascertain when we unseal in the dissecting room, the door of this,—now the sepulchre of thought,—rely on this, and you deserve the lash of the satirist.

“Was ever such an ass as that
 Who hoped, by slicing mutton fat
 And pulling candlewicks to pieces,
 To tell why light should spring from greases?
 Yes, one;—that still more precious fool
 Who, in the anatomic school,
 Expected with dissecting knife,
 To learn from death the laws of life.”—BÉLANGER.

It has been frequently urged against the truth of phrenology that it has been but little accepted by the world in general, and entirely ignored by corporations and learned societies. These bodies are slow to accept new truths and generally oppose the advance guard of thought. “In universities and colleges,” says Lord Bacon, “men’s studies are almost entirely confined to certain authors, from which, if any dissenteth or propoundeth matter of regardation, it is enough to make him be thought a person turbulent.” Of this we have many examples. Columbus, before the doctors of Salamanca, was accused of heresy, and pointed at with the finger of scorn for declaring his belief in the rotundity of the earth. Harvey, the discoverer of the circulation of the blood, at first received contempt at the hands of the college of physicians, and of his medical brethren, who even refused to meet him in consultation. The astronomical discoveries of Newton were received with equal disfavour. Lady Mary Montague, the introducer of inoculation, was held up to public odium. Jenner, the discoverer of vaccination—a process now in universal use—was refused a license to practise by the college of physicians, treated with ridicule and contempt, and the theologians hurled their anathemas against him, Errhman of Frankfort alleging that vaccination was a real antichrist. Are not these scars “the mark of the beast”?—they were taken from the cow.

Superstition in one age, materialism in another, oppose the advance of Moral Science. Are they not divers forms of the same principle? Materialism in these latter days has assumed its grossest form, that of snobism, which now aims at universal empire. Intelligence is

crushed by brute force ; skilled labour by manufacture ; genius is bought or enslaved by wealth, and material is more valued than art—except that of adulteration. Wealth and honour are showered upon the lucky inventor who can profitably adulterate some article in daily use ; who can entwine wool and cotton and yet cry *de-laine* ; who can substitute strychnine for hops in beer ; silica for soda in soap ; sloes for the juice of grapes ; and, rivalling the giant whom Jack slew, grinds the bones of Englishmen to make their bread.*

Thus the truth of our science has even greater enemies to contend with than the imprecations of snobs or learned corporations, as it fights with a monster whose diploma may be summed up in one small word—SHAM.

But a day will dawn which will see the garotte placed on the throat of this murderer of the noble and intelligent of the age. Then will crushed Nature return to the freedom of her youth. When such finds a dishonoured grave and is not represented in Parliament we may then in honest gaze on our physiognomy in a glass, and forget what manner of men we were ; for we fear until this consummation, physiognomy, as opposed to counterfeit, by teaching us to know our neighbours, and above all to know ourselves, will remain unpopular.

GRECIAN ANTHROPOLOGY.†

IN the pursuance of his great design of illustrating the anthropology of the Italian Peninsula, Dr. G. Nicolucci has added another important contribution to the excellent series already issued. This fresh labour refers immediately to the anthropology of Greece, which could scarcely have been omitted from his plan, as the two countries, although originally peopled by tribes distinct from each other, have been so much connected, certainly since the days of the Romans, and by emigration much earlier, that the anthropology of the one could hardly have been rendered complete without attempting that of the other. Indeed, that section of Dr. Nicolucci's scheme immediately

* After the Crimean war large cargoes of bones were brought from the Crimea. They were of a variety of animals—horses, cattle, sheep, and even men ; these were mostly ground for agricultural purposes, but the whiter and better specimens were selected for the flour mill. This gives a reality to Fee-faa-foo-fum, the declaration of the giant—(War ?) unknown before.

† *Sull' Antropologia della Grecia. Memoria di Giustiniano Nicolucci, con 5 tavole.* Napoli, 1867, quarto.

preceding the one now issued had reference to the Japygians, a people who occupied the south-eastern corner of Italy, were regarded as of Pelasgic origin, and as having in primitive times wandered from the opposite coast of the Adriatic.*

To attempt the anthropology of Greece demands a very accomplished and masterly hand. The author enters upon his erudite labour with a true conception of its stirring interest, and in a right spirit. He exclaims—"Greece! that magical name, which remains from our earliest years engraven on our hearts and in our minds; that name which by its mere pronunciation awakens in us the glorious memory of a people, which by the spontaneous and natural development of its own forces knew how to elevate itself to the representation of the most noble and highest idea of humanity; that name could not but attract the attention of the anthropologist, who, in one race embracing the sum of human perfection, seeks to point out what may have been its physical conformation, and, especially, what was the form, the volume, and the capacity of its skull, the chamber of the brain, the organ most significant in the diversified manifestations of intelligence." (P. 1.)

Dr. Nicolucci is at once led to the difficult question of "The first inhabitants of Greece." He says, we know from the Greeks themselves that their country was inhabited in ancient times by various tribes, which they afterwards distinguished as barbarous, and among these was one, numerous and powerful, that bore the name of Pelasgi. The ante-historical times of man are involved in so much obscurity that we dare not risk the opinion whether the various populations scattered through the land of the Hellenes belonged to one race, all having relations in origin and customs with the Pelasgi, and much less are we able to regard as certain that there might be as many races represented in the territory of Hellas as there were nations of various names which divided the possession of that country. Yet he hopes the investigation of the allusions preserved in the historians, poets, and geographers, into which he enters, but into which we are not able to follow him, may afford some light in resolving these delicate questions. Still, what relations the Thracians of Macedonia and the other tribes of other districts of the country bore both to the Pelasgi and also to the Hellenes, is a problem which truly may never be resolved conclusively. There seems much probability that an Egyptian colony, conducted by Danaus, anciently occupied the territory of Argolis, and gave the name of its leader to the Pelasgic people who inhabited the country before; but it is not equally probable that Cecrops might

* *Sulla Stirpe Japigica e sopra tre Crani ad essa appartenenti.* Per Giustiniano Nicolucci, con 3 tavole. Napoli, 1866, quarto.

have come from the same region of the Nile with many emigrants, and imparted his name to Attica, previously called Acte, and from him Cecropia. Although this migration is held for true by some historians of modern times, no one has confided in it ; some ancient authorities among the Greeks themselves always considered Cecrops as an autochthon, or born on that soil which was the theatre of his fabulous exploits.

Yet it was universally accepted by all antiquity that the Phœnicians came with Cadmus into Bœotia, where they built the city of Cadmia, which afterwards became Thebes ; and assuredly historical records not only retain as true the Phœnician origin of the population of the Cadmian portion of Bœotia, but also tell us that the idiom spoken in Thebes retained not a few foreign elements. That city boasted of having received from its Phœnician colonists the precious gift of letters, and, even in the time of Pausanias, they showed the ruins of monuments, records of Phœnician worship.

The arrival of a Phrygian colony with Pelops is attested by the authority of many writers, and, the author thinks, acquires greater probability by recent investigations. Still the earliest traditions give Pelops the credit to have been a native Grecian. Of the presence of Thracians in different parts of Greece, and especially in Macedonia, Thessaly, Bœotia, and Attica, the testimony of the ancients is so uniform that it cannot be doubted ; but, as the author remarks, it is uncertain to what race they belonged. The Thracians of Herodotus were a rude and uncultivated people, composed of not less than twenty-two tribes, among which Finns and Slaves held the first place. The Pierians, a Thracian people, were honoured and revered by the Greeks in all times as the institutors of civilisation and propagators of religion. Hence the difficulty of regarding the early barbarous Thracians as the people thus accredited. K. O. Müller has met this difficulty by concluding that there were two distinct races of Thracians. Speaking of the aboriginal Thracians he says, " poets who sang in an unintelligible barbarous language could not have had more influence on the mental development of the people than the twittering of birds."

But it is needless to refer to the traditions and legends of other races till we come to the Pelasgi, so numerous and powerful, whose authority extended over the greater part of Greece. Besides all Thessaly, they inhabited Epirus ; their name was also heard in Bœotia, whence they expelled all the other barbarians who occupied it, although they did not continue there long, but were in their turn driven into Attica ; but Attica was already Pelasgic before this immigration of Bœotian Pelasgi. Like Attica, according to Strabo, Ephoros asserts the Peloponnesus to have been Pelasgian, which indeed bore the name

of Pelasgic, and certainly, if not all, the major part at least of the Peninsula was possessed before the Doric invasion by the Pelasgic race. Argolis, Achaia, Arcadia, were countries which all Greece held to be Pelasgic, and the traditions, the history, the local names leave no doubt as to the origin of their populations.

But who were these Pelasgi? What were their ethnic relations either with the Hellenes or with the other barbarous races who occupied Grecian territory? We have not sufficient testimony to tell either their epoch, their limits of residence, their actions, or their characters; but, from what may be collected from Herodotus, they were not Hellenes, because they spoke a barbarous language, distinct from the Hellenic.

Among these various elements, at length the Hellenic race rendered themselves predominant, and became the sole representatives of the population of Hellas or Greece. Great interminglings of people still continued in the country, for which it was particularly well suited, where the people could so easily change from place to place. The author excuses himself from noting the principal of these migrations, and from seeking to explain in what ways and by what means the race of the Hellenes extended and spread themselves over the whole of Greece.

Hellen, the son of Deucalion, is certainly a mythic personage. Neither the epoch of his existence, nor his genealogy can be accepted as historical data. But the fable contains in itself a very elevated meaning; it serves to attest the national relations which existed among all the Greeks, and may suffice for an indication whence follow the chief divisions of the Greek race. The sons of Hellen extended themselves from Thessaly through the whole of Greece, and mingling and confounding themselves with the barbarous and Pelasgic tribes, impressed upon all a common physiognomy, and established that national unity which was not the last boast of Greece.

In his chapter entitled "The Hellenes," Dr. Nicolucci traces, by the ancient legends, the descendants of this mythical Hellen, his three sons, Aeolus, Dorus, and Xuthus, their conquests, their migrations, the cities and states and the dynasties they founded, in a highly interesting manner. He then refers to "The return of the Heraclidæ and the Doric conquest of the Peloponnesus," that great event which stands between the legendary and the historical epochs of Greece. To this subject also the author devotes a chapter, to which he looks for some development of the connections which joined together the various branches of the Greek stock, and the probable relations of these with the races that preceded the Hellenic element on the soil of Greece.

But it may be noted that, notwithstanding this successive exten-

sion of the Hellenes through the whole of Greece, and their conquests over the barbarians or non-Hellenic tribes, if we were to have asked the Greeks themselves whence they came—from what country they had first turned their footsteps towards Greece, they, who were such keen investigators of their own origins, would have answered,—from no other country, they were autochthones, who were born and who multiplied in the same land in which they lived. This was often their boast.*

The author then goes on to tell us that the comparative study of languages has, in recent times, come to take the Greeks from that isolation to which their national pride had condemned them. They are now no longer *autochthones*, no more born of the soil, but connected by the indissoluble bonds of language to all those other people which compose the group of the Aryan, or Indo-European family. A common language was at one time spoken by the ancestors of all these people before they separated from one another, and that language, now no longer living, was the common mother of many, among which the Greek holds an eminent position.

This stupendous hypothesis, which has the advantage of having an era lost in impenetrable antiquity, is supposed to afford a better solution of the origin of the Greeks than their own simple deduction upon this obscure subject. They perceived the defect of all historical or traditional data for their origin, and hence inferred that they were sons of the soil. There were no developmentalists in those days. The researches of modern comparative philology have given rise to a much bolder *inference*, that the Greeks and all other European races are immigrants, according to our author, from the Hindoo Koosh, and the surrounding regions, from whence tribes of India also emigrated in a south-eastern direction.†

It is not, we suppose, pretended that philological notions of this kind, even allowing that to many disciples they carry their own conviction with them, are to be received instinctively or absolutely, like the truths of mathematics. Such certainly has been very much the lot of this Aryan hypothesis; but may not the philosophical reasons for it be questioned? Might it not have been expected that before such a doctrine could have been put forth, supposing its philological

* This reminds us of the amusing conversation with the North American Indian presumed by Catlin, when questioned as to where he came from. *Manners, Customs, and Condition of the North American Indians*, vol. ii, p. 230.

† It is almost needless to say that this is merely the region defined by our author, as the primal seat of the Aryans. There is no fixity of opinion among the acceptors of the Aryan hypothesis with respect to this primal seat, almost every writer defines it differently, as Persia, etc.; and well he may, for we are not aware of anything to limit the selection any writer chooses to make.

grounds to be irrefragible, its authors and recipients would have sought for it some extraneous support, out of the immediate domain of philology? It is not unusual in science, where such mighty deductions are formed, bearing upon such very important subjects as this, to seek confirmation from other branches of knowledge, which are capable of lending support or otherwise. Do the facts admit of no other explanation? In truth is this the most plausible explanation of these facts? Are there any archæological or other data to show that any Indo-European race ever dwelt in Bactriana, that such people ever passed through Khorassan and Mazanderan, through Persia, Armenia and Asia Minor to the shores of the Hellespont, or that they were ever present in any of these countries? History knows nothing of these things whatever. Still we cannot be required to suppose that the Indo-Europeans took this incredible journey of about three thousand miles without resting in the countries through which they passed, and without leaving abundant traces of their residence as they went. But it may be said that this transmigration happened long before the earliest history had its date. Still we see palæontology and archæology rendering their testimony not only to the actual existence, but even to the grade in humanity of the man of the drift period, who preceded the Indo-European migration, it may be safely said, if we do not misunderstand the hypothesis, by many ages. Is it not, therefore, reasonable to ask for confirmatory evidence before we admit that races of a totally different and more exalted kind have traversed Asia and Europe in search of a home? Does not even the very magnitude of this hypothesis, before which all other events in human history sink into insignificance, demand an abundance of incontrovertible confirmatory evidence before it can be admitted as a sound philological inference? Should not the propounders of the hypothesis indicate some motive for emigrations at that most ancient period, some reasonable and even plausible motive? for if man were man in those distant ages, he would not take a march from the Hindoo Koosh into Eastern or Western Europe, a direct march or a progress interrupted by longer or shorter periods of repose, without most pressing motives, without plans, without objects in view of a more or less definite character. Such a proceeding among a society of human beings is absolutely incredible. Yet the propounders of the Indo-European hypothesis are not known to have made the attempt to smooth these difficulties to the reception of their doctrine. Still, the fact is that such has been the deference which has been paid to the great and indisputable learning of these philological philosophers, that their doctrine, notwithstanding all its improbabilities, has been embraced without inquiry and without hesitancy.

Were men produced by some process much quicker than the ordinary mode of generation in those days? and did they so accumulate in this elevated central region of Asia, that they were obliged to seek room in which to dwell? If so, this is contrary to all we know of mankind, and certainly requires to be proved before it can be received. If they were so numerous and over-populous, did the same plague of progeny abide with them through the whole of their course, so that they could find no intermediate permanent resting place till they had traversed countries three thousand miles long in a direct line before they reached Hellas and Western Europe? It is still scarcely quite superfluous to ask whether the new countries through which the Indo-European families are supposed to have travelled in the line of their migration were peopled or were mere waste wildernesses? It is now allowed that they were inhabited; hence is it not almost certain that the course of the emigrants, or perhaps more properly vagrants, would have been continually interrupted; that they would have had to fight their way through many hostile tribes of primitive men?

The advocates of the hypothesis finding in some of the languages of the countries through which they have chosen to conduct the Aryans in this wondrous migration, either resemblances of vocabulary, resemblance of structure, or other more refined and indefinite lingual resemblances, have considered these to be proofs of the migration itself; but it may still be asked, are these sufficient evidences to carry the Aryans through all difficulties, and to establish the validity of the migration? Also it may be asked, may not the phenomena admit of an easier and more philosophical explanation? As the antiquitousness of the whole of this suppositional transmigration is not so vast as to preclude some other connecting links between the Aryan race in its cradle in Bactriana and its settlement in Hellas, have we not a right to expect many supporting pillars for this hypothesis before receiving it?

Our author is contented with merely quoting a passage from one of the learned propounders of this hypothesis in its support, to show that Bactriana was suitable for its development, because of the temperate climate of this region, its varied and fertile soil, and its central geographical position. He says, "it constitutes the great centre of communication between internal Asia and western countries." If so, is it not remarkable that it should have been so little travelled either in historical times or in modern days? But who does not see that other regions might easily be pointed out quite equal, if not superior, in all those qualities which fit Bactriana in the eyes of Professor Pictet for the birth-place of the Indo-European races? So that, as far as we

see, there is no other or better foundation for this vast hypothesis than the philological one. We may then turn back to the question and ask, may not the lingual facts admit of some easier, less fanciful, explanation consistent with what we know of the history of mankind? We know a little of the history of Bactriana. We know that it was visited by those enterprising and immortal people who have engaged the pen of Dr. Nicolucci.

Anterior to the Greek period, Bactriana had been invaded by Assyrian and Persian monarchs. Diodorus, from Ctesias, tells us of the invasion of the country by Ninus and Semiramis, the founders of the Assyrian Empire, more than two thousand years before Christ. Also that Cyrus, the founder of the Persian Empire, made war on the Bactrians. And Herodotus relates that Artaxerxes Longimanus, somewhere about 450 B.C., repressed the revolt of the Bactrians. But the historical event which stands out prominently above all others in the history of Bactriana, is the expedition of the Macedonian monarch, Alexander the Great, to India. In the year 329 B.C. Alexander crossed the Paropamisus, and entered Bactria.

We have no intention to follow the Macedonian in his conquests, but will merely quote a passage which expresses in a brief and summary way some of the results of this wonderful campaign. "The history of Alexander forms an important epoch in the history of mankind. Unlike other Asiatic conquerors, his progress was marked by something more than devastation and ruin ; at every step of his course the Greek language and civilisation took root and flourished ; and after his death Greek kingdoms were formed in all parts of Asia, which continued to exist for centuries. By his conquests the knowledge of mankind was increased ; the sciences of geography, natural history, and others, received vast additions ; and it was through him that a road was opened to India, and that Europeans became acquainted with the products of the remote east." On the death of Alexander, a Greek dynasty was established in Bactriana, and a succession of Greek sovereigns ensued, who struck coins in their own names, and, in imitation of the Persian monarchs, assumed the title of "king of kings."

It might be asked, do the historians of Alexander's campaigns inform us that, when the Greeks reached this remote country, they found the people, in their persons, their habits, their manners and customs, their government, architecture, or in any other particulars—especially their language—so closely resembling Europeans, more intimately themselves, so that they were inclined to suspect that the two races had a common origin? Has there ever been any proof that the Greeks ob-

* Smith's *Dictionary of Greece and Rome, Biography and Mythology*, art. Alexander III, vol. i, p. 122.

served any of these things, or ever spoke of them? Yet from what we *know* of human races in all parts of the globe, their permanency and unchangeableness, the general parallelism of the development of the same race in different countries, we have a right to expect these Indo-European invaders, if they were Indo-Europeans or Aryans, although the secret was wholly unsuspected by themselves, would have been filled with amazement upon this very point of resemblance. The author tells us at the opening of his memoir, that the Greeks themselves owed their highest elevation to "the spontaneous and natural development of their own forces." Is it to be conceived that "the spontaneous natural development" of their brethren in Ariana and Bactria had no results? Is this true philosophy, or do like causes produce unlike effects?

According to the hypothesis, the Aryans could not have been rude barbarians, but must have been a somewhat civilised and accomplished people, or they certainly could not have undertaken the supposed migration and carried it to a successful issue. They must besides have been the speakers of a well-developed language, bearing upon its surface a striking resemblance, in its vocabulary and in its forms, to that of the invaders. Perhaps it is not improper to add that upwards of two thousand years ago, the likeness between the two tongues must have been somewhat greater than that which is found between Sanskrit and Greek at the present day.

It might be asked, does Arrian or Quintus Curtius, in their histories of Alexander's great oriental campaign, anywhere allude to such a likeness between the language of the Bactrians and that of their invaders? We are not aware of anything in the works of these historians which have come down to us that can be quoted as giving any valid support to the Aryan hypothesis; and it may still be asked whether we have not a right to expect such passages referring to some of the very complex relations presumed to have existed previously between this mother country of Bactriana and Greece?

The Greeks, according to this view, like all the rest of their brethren of Europe, came from the east, and the region from whence they set out was that to which the "Indo-European traditions" carry us back, viz. the region of Bactria, between the Indus on the south, Bukharia on the north, Belurtag on the east, and the territories of Merv and Herat on the west. Setting out from Bactriana, the Aryo-Hellenes pushed onward through the region of Herat, and continuing their route towards the Hellespont, through Khorassan and Mazanderan, they finally reached Thrace, Macedonia, and Thessaly, from whence they scattered themselves through the remaining countries of Hellas.

We know that it is asserted that the Aryan immigration, from whence

the Greeks are supposed to have derived their origin, took place at a prehistoric period presumed to be immensely remote. In truth, the doctrine is, as explained by our author, that in the earliest primitive times the country of Hellas was inhabited by barbarous tribes. We may probably suppose that these rude people were the contemporaries of the man of the drift period or the man of the cave period; that they lived in the age of the mammoth, the *Rhinoceros tichorinus*, or perhaps the reindeer, and no doubt long afterwards; and also, perhaps, that they used flint tools and weapons. Subsequently—how long subsequently no one has yet ventured to declare—the Aryan invaders came among these barbarous tribes, like Xerxes in a succeeding age, and, with or without struggle, took possession of their country, and not only settled in it, but made it their own. So that in reality the barbarous tribes are the autochthones, from whom, according to the hypothesis, the Greeks are not regarded to have been the descendants.

Although there may be but exceedingly faint indications, or perhaps no indication, of the communication of Greeks with this distant country of Bactriana much before Alexander's invasion, there cannot be any doubt that there had long been some commercial intercourse. We may therefore ask, what ought we to expect from the intercourse of so polished a people as the Greeks with countries wrapt in oriental despotism and mediocrity? What effects might be expected upon their arts and their language, if not before, especially when Bactria became a Greek dependency? Has Great Britain produced no effect in India? Is it not almost certain that the Greeks emigrated in considerable numbers to Bactria? Men of talent, who must have taken with them their arts, their learning, their literature and their language, to be communicated to the orientals, to receive from these latter subtle and mystical people the impress of the working of their own minds upon the gifts. This is not the place in which to attempt any answer to this or to any of the preceding questions. Besides which they are questions that demand a learning of another kind, almost as profound and varied as that of the founders of the Indo-European hypothesis themselves. We can only confine ourselves here to two or three facts.

The Bactrian *alphabet* has not, as might have been expected if not required from the Aryan hypothesis, an independent oriental origin. On the contrary, the ablest scholars derive it from the same source as the Greek alphabet itself. Both are derived from the Semitic, or Phœnico-Babylonian. M. Ernest Renan and Mr. Edward Thomas agree upon this point. The former appears to regard the eighth century before the Christian era as the period of the extension of the Semitic

alphabet to Bactria,* but upon what authority the latter confesses he is unable to discover.† Mr. Thomas says, that "B.C. 250 is the earliest epoch at which any example of Bactrian epigraphy can at present be quoted."

It is known that the Greeks did not find their supposed ancestors in Bactria, or in any of its surrounding regions, using a *coinage*, or anything deserving of the name. They most probably employed the precious metals as a medium of exchange, but had nothing deserving of the name of a coinage, if even they possessed plates and bullæ of gold and silver stamped with any characters to be used as a coinage. Quintus Curtius does not mention a coinage, and there are no remains of any such coinage—we mean a coinage such as had been developed in Macedonia and the other states of Greece. Ancient coins are unquestionably now found in great numbers in these very countries; but are these the representatives of those states which remained behind when the Indo-European tribes emigrated from the Hindoo Koosh and its surrounding regions? We have never been asked to suppose among other things that the emigrants left none of their brethren behind, but fled from their temperate clime and their fertile soil as they would have fled from a plague spot, leaving none behind. Indeed the hypothesis demands a strong remnant to have been left in this cradle of the stock. Indian and Aryan numismatics have now been extensively studied, and the question of the origin of the art of coinage in the east discussed by many able and competent men. They have none of them pretended to have found in Bactria coins indicative of a refined and powerful nation, before it became connected with Greece. On the contrary, the earliest period of this oriental coinage was certainly not distinguished by coins superior to those of the ancient Britons; they were not even equal to those debased imitations of the coins of the Greek colonies. The

* "Un fait beaucoup plus important que tous ceux qui viennent d'être cités, est la transmission qui se fit, vers le VII^e siècle avant notre ère, de l'alphabet Sémitique à tous les peuples du monde ancien, par l'action combinée de la Phénicie et de Babylone. Semé sur toutes les côtes de la Méditerranée jusqu'en Espagne, porté vers le midi jusqu'au fond de l'Ethiopie, gagnant vers l'Orient jusqu'au Pendjab, l'alphabet Sémitique fut adopté spontanément par tous les peuples qui le connurent." *Hist. et Système Comparé des Langues Sémitiques*. Paris, 1855, p. 195.

† *Essays on Indian Antiquities*. By James Prinsep. Edited by Ed. Thomas. London, 1858, vol. ii, p. 145. It appears from a Memoir read before the Asiatic Society, February 3, 1868, that Mr. Edward Thomas now in some measure may concur in this view of M. Renan. "Specimens of which writing (in the Pehlvi alphabet, which is derived from Phœnic-Babylonian teachings) in an already fixed and cultivated form, occur as early as the time of Sargon, B.C. 721."

coins of India at first were mere "small unstamped flattened pieces of silver or other metal, either quite smooth or bearing only a few punch-marks on one or both sides."* The question whether a die-struck coinage existed at all in India, prior to the period when the Greco-Bactrian coinage made its appearance, has been debated, and the authorities preponderate on the side of such coinage being entirely an imitation of this latter production, which may be satisfactorily referred to the Greeks. That any coinage of a better kind was current in Bactria at a much earlier period than Alexander's invasion—a pre-Greek coinage—has never been discovered or even dreamed of. If in their emigration the Aryans left behind them a race of people of equal endowments, who must have had the same wants, why had they not developed a coinage even of the same high character as the Greeks before these people returned to visit them again? Indeed, we may safely conclude that the people of Bactria and of India, like the ancient Britons, were equally indebted for the great advance of a coinage, to the Greeks. Prinsep says with justice, "coinage is certainly one of the improvements which has travelled, and is still travelling, eastward."†

There are many *antiquities* in the countries surrounding the Hindoo Koosh. Afghanistan abounds in ruins, from which antiquities of native origin and of very great interest are continually dug up. Sculptures of various kinds are common, sometimes entire figures of good size are met with, very often carved figures in relief of a small size, representing dignified personages with their attendants, most probably kings, to whom prisoners are brought, as in the Egyptian and Assyrian sculptures and paintings, to receive condign punishment at the monarch's own hand.‡

A still higher style of art is often met with among these sculptures, which is sure at some not remote period to engage the attention of students of the fine arts deeply. We are only able to introduce in woodcuts two examples of these beautiful productions. It should be mentioned that they are executed in a hard, fine-grained and very dark slaty stone, full of shining particles of mica, which is capable of rendering as fine a surface as marble.

The first figure is somewhat like Jupiter Ammon. The second is a

* Prinsep, *op. cit.*, i, 209.

† *Op. cit.*, vol. i, p. 4.

‡ In one of these bas-reliefs, in the possession of the writer, the monarch is seen seated in the oriental fashion, with his knees spread out and his hands upon them, on a throne, and clothed in a *pallium*. His face is without beard or moustache, his head uncovered, and his hair elegantly arranged and tied in a knot on the crown of his head, in a Spartan fashion. Before the throne lies a figure upon his back, and with his shield under him, who may be regarded as a prisoner, as his feet are cut off. Beside this man is an ape upon his feet. The whole scene appears to be taking place before

fine face of a youth with moustaches, of Persian look, the hair treated in a manner that is entirely Greek. The round node on the forehead is oriental; it is the Hindoo *tika*, possibly subsequent to the supre-



Bearded Man. Afghan Marble. Half size.

macy of Buddhism, and is common in the series. But both figures must be regarded as strongly indicative of Grecian art, and that of a high order.

It is not pretended that the ruins of Afghanistan, whence these ancient sculptures are derived, are of any very remote antiquity. They are classed under two separate chronological heads, as "Ancient Ruins," and "Modern Ruins," which possess also different architectural characters. The former class are, without exception, the relics of different

a temple, one of the square pillars of which is represented with its foliated capital. On the pedestal of this pillar are standing, in repose, a man and a woman fully draped, with a Grecian appearance. A man in oriental costume, and with a turban on his head, bracelets on his arms (another prisoner) is being brought up to the king by an attendant. The deposition of stalagmitic matter upon the *fractured* surfaces of these figures, is an indication that they have been broken or destroyed at a remote period of time.

bygone idolatrous nations, whilst the latter, on the other hand, are of a comparatively recent date, and all of Mahomedan origin.



Moustached head. Afghan Marble. Half size.

"The ancient ruins appear to be mostly of Buddhist origin; if not of even more ancient date; for, in the time of Alexander, which was antecedent to the Buddhist era, this region was peopled by Indian tribes, who had many strong or extensive fortresses in commanding parts of the highland tracts, the attack and capture of which so greatly added to the Macedonian conqueror's fame."* The antiquities more particularly described by Mr. Bellew in his curious and instructive volume are rock inscriptions, one of which is regarded as one of those pillar edicts issued by Asoka, publishing the establishment of the Buddhist faith as the state religion, about 250 B.C.;† cave temples, hermit cells, idol temples and cities. The modern ruins are Mahomedan.

Having adverted to the language, the coinage, and the arts, all of which, in a *prima facie* view, seem to indicate more or less of a Greek influence, we may turn to anthropological considerations, at which we shall only glance. But, before doing this, it may not be unadvisable to mention that all philologists even are not unanimous in their admiration and appropriation of the Aryan hypothesis of the German scholars. Mr. Hewitt Key Professor of Comparative Grammar in Univer-

* *A General Report on the Yusufzais.* By H. W. Bellew. Lahore: 1864, p. 109.

† *Ibid.*, p. 113.

sity College, London, delivered a lecture in 1862, in which he made serious objections to the antiquity of the Sanskrit language and writings themselves. In this lecture he exhibits great modesty and that respect for truth which becomes a man of science. At the commencement he says, "It would have been simply indecent if the present writer had expressed his fears in the form of a direct proposition, conscious as he is that he comes to the inquiry wholly destitute of what may at first be deemed an essential requisite, a knowledge of the Sanskrit language. . . . The question here naturally suggests itself, how it is that I have taken upon myself to enter into a contest for which I am confessedly so ill-equipped? And my answer is that I find the same suspicions which have found a way into my own mind entertained by many others, and those, too, gentlemen whose position as scholars gives great weight to their opinions, though, like myself, they are wholly wanting in the special qualification—a knowledge of Sanskrit."^{*}

The worth and reliability of the materials upon which the knowledge of the Sanskrit is built may be estimated by the following remarks of Professor Key, "I do not propose to enter into the domain of Sanskrit history and chronology, a task for which I am wholly unfitted, especially as those who have the best qualifications admit that it is involved in the greatest obscurity, nor indeed could one expect easily to find materials for accurate investigation in such a literature as that of the Vêdas. The 'Mantras,' on the one hand, dealing for the most part in 'the devotional,' and the 'Brahmanas,' on the other, with 'the ceremonial and dogmatic,' can scarcely be available for such a purpose. As to the Upanishads, or the short appended treatises, I will be satisfied with a second-hand quotation from a work of a learned Hindû, that they 'contain some rude indications of philosophic thought, and, like the twinkling stars on a dark night, may occasionally serve as guides in a history of Hindû philosophy. They do not however exhibit any great attempt at method, arrangement, classification, or argument. Even there the poetry predominates over the logic. Bold ideas abruptly strike your fancy, but you find no clue to the associations which called them forth in the author's mind, and search in vain for the reasons on which they are based. Sublime thoughts are not wanting, but they resemble sudden flashes, at which you may gaze for a moment, but are immediately after left in deeper darkness than ever. Nor are they free from those irregular flights of the imagination in which poets with vitiated tastes delight to indulge, setting

* Qveritvr. *The Sanskrit language, as the basis of linguistic science, and the labours of the German school in that field, are they not over-valued?* By T. Hewitt Key, M.A., F.R.S. Berlin, 1863: pp. 2 and 3.

at defiance all rules of decency and morality." (Banergea, *Westminster Review*, New Series, vol. xxii, p. 463.) Professor Key proceeds to the etymologies of the Sanskritists, and exposes them in a very amusing manner. In the second part of his published brochure he criticises Bopp's *Comparative Grammar* and Max Müller's *Lectures*, the great *principia* of the science, in a manner which no one except a learned philologist could do.

In truth the result of a reading of Professor Key's pamphlet is a strong feeling of doubt, whether the Sanskritists are not presuming very much upon the general and total ignorance of men of science regarding the whole of the subjects embraced in their own studies. The dicta of these learned men cannot be disputed, since they are not understood. The preliminary knowledge requisite for their being understood is very rarely acquired. An impression deeply confirmed when we notice Professor Key's hesitation, and the obvious reluctance with which even he ventures to dispute many of the points connected with the great hypothesis.

Another distinguished English philologist appears to be not at all disposed to embrace the views of Sanskritists in general, but rather to dissent from most of them. Dr. Latham has said, in his *Varieties of Man*, that "the nation that is at one and the same time Asiatic and Indo-Germanic, remains to be discovered. . . . I abstain from any positive expression of opinion as to the quarter from which the Sanskrit language originated. That the language which stands in the same relation to it, as the Italian does to the Latin, has yet to be discovered I firmly believe; to which I may add that, except in Asia Minor or Europe, I do not know where to look for it."† The opinions of Dr. Latham upon this subject have been summed up by Professor De Quatrefages, in his recent learned and very able Report on the Progress of Anthropology, which is, in truth, an elaborate argument in support of monogenism, somewhat unlike Prichard's in one respect, as it is the argument of a naturalist who has argued diligently and much more boldly, still, it may be much doubted whether more successfully, than his great predecessor. De Quatrefages, speaking of "European Origins," says, "Quant à Latham, il reconnaît que l'histoire est muette sur les premières migrations; mais, recourant à la méthode *à priori*, il pense qu'elles ont dû avoir bien de l'aire la plus étendue vers l'aire la plus resserrée, et il conclut que le siège premier du Sanskrit a dû être à l'est ou au sud-est des contrées où se parle le lithuanien, et que son origine est européenne."‡

* Ibid., p. 3.

† Latham's *Varieties of Man*, p. 547.

‡ *Rapport sur les Progrès de l'Anthropologie*. Par M. A. de Quatrefages. Paris, 1867: p. 482.

The venerable Mr. John Crawfurd also, another able philologist, versed in the languages of the east, sees no truth whatever in the Aryan hypothesis. He concludes his lucid memoir upon the subject thus. "From the facts I have adduced in the course of this paper I must come to the conclusion that the theory which makes all the languages of Europe and Asia, from Bengal to the British Islands, however different in appearance, to have sprung from the same stock, and hence, all the people speaking them, black, swarthy, and fair, to be of one and the same race of man, is utterly groundless and the mere dream of very learned men, and perhaps even more imaginative than learned."*

There are many difficulties which stand in the way of the reception of the Indo-European hypothesis of an anthropological nature. Some of these have been well stated by Professor Broca, in his article "*Anthropologie*,"* which has been translated in two numbers of this *Review* (Vol. v, p. 193 ; Vol. vi, p. 35). This excellent writer shows that human types have been permanent and unchangeable, as far as the historic period reaches ; that the man of the ancient Egyptian monuments is the man of to-day, and so among all other races. But the admission of the Aryan hypothesis supposes that almost all the races of Europe as well as of India have been derived from one pre-historic primæval race, and that the great differences among these various peoples have been produced by many causes, operating through a great succession of ages. This is contrary to all our knowledge, but in respect to the propounders of the hypothesis, admits of being supposed and presumed. Dr. Broca attempts in various ways to reconcile it with the teachings of anthropology, and fails. At length he is successful, by conceiving another hypothesis complimentary to the Aryan.† It is that the autochthones of the different countries the Aryans invaded, mingled their blood with those invaders, in different degrees, and that this phenomenon has occasioned the very different permanent new races who inhabit India and Europe at the present day. This is erecting hypothesis upon hypothesis by way of explaining the difficulties produced by the first hypothetical structure. The doctrine might do as an hypothesis, but cannot be accepted as consonant with scientific truth. The whole must be regarded rather as a proof of the ingenuity of its accomplished author than as affording the slightest satisfactory evidence of the consistency of the great Aryan hypothesis with truth.

* *On the Aryan or Indo-Germanic Theory.* Trans. of the Ethnol. Soc. New Series. Vol. i, p. 235.

† *Dictionnaire Encyclopédique des Sciences Médicales.* Publié sous la direction du Dr. A. Dechambre. Paris, 1866.

‡ *Anthropological Review*, vol. vi, p. 38.

But it is time that we returned to our learned author after this digression, which is intended to be suggestive and not demonstrative in any way, unless it be in showing some few of the inherent difficulties which stand at the foundation of that hypothesis the philologists have thought themselves justified to propound. "The Hellenes all had the same origin, since all were descendants of the common father, Hellen, who was the stock from which sprang the various branches of the family. This idea of their origin was accepted as an indisputable fact, and was the foundation of the faith they held in their common parentage" (p. 34). This is proved by a reference to the reply made to the Athenians when the Macedonian Alexander I. was sent by Mardonius to persuade them to separate from their alliance with Lacedæmon. They told him the Spartans and Athenians were of the same blood, the same tongue, had the same gods, the same temples, the same sacrifices, the same manners and customs, and that they would never dishonour themselves by perfidy to their brethren.

The author then enters upon an interesting chapter on "The Modern Greeks" and their ethnography. He says, the Romans did not send, as into other conquered countries, colonies into any part of Greece. The Hellenic territory was neither invaded by conquerors nor despoiled of its inhabitants. The two races remained always separate, and the Hellenic blood was never contaminated by mixture with Latin blood. But when the seat of empire was changed to Byzantium, Greece followed its fate, and participated in the mortal languor which led to its complete dissolution. Alaric scourged her. The incursions of the Vandals and those of the Ostrogoths were not less fatal to her. The Bulgarian Slavi came next, about the year 500, and after three centuries of destruction and pillage, finally established themselves in Macedonia and in some parts of the Peloponnesus, where they remained, mixed and were confounded with the native population. From this and other Slavic inundations, it has been thought that a profound modification was produced in the Hellenic stock. But the Slavic element which penetrated into this country only affected certain parts; it was not equally distributed over all Greece; and the author does not hesitate to say that this influence has been greatly exaggerated, alluding in particular to Fallmerayer and Dr. Hyde Clarke. The latter has expressed himself rather confidently in this *Review*, as to the Hellenic element being extinguished.* The author then enumerates in chronological order these Slavic invasions, and the intrusions of other races into Greece, and closes the chapter with the expression of his concurrence in the views of Zecchini, who speaks in a manner which is exceedingly decided, to this effect. "Greece, although subjugated

* Vol. iv, p. xcix.

by many foreign peoples, never made truce with them, but looked upon them always as foes, in her bosom entertaining horror and disgust towards them, like a woman who nourishes a monster at her breast. She never lived with them, never matched with them, never had anything in common with them, neither games, nor festivals, nor dances, nor feasts, nor meetings of any sort, whether for joy or for grief, and, although a slave, she is able to say she has always ruled over herself.”*

Dr. Nicolucci, in all his anthropological works, has one peculiar merit, that of using his best efforts to elucidate the craniology of the people of whom he treats, and giving it that prominence it deserves, without neglecting any other branch of the investigation; besides which, where these are ancient people, he never fails to embrace that of their modern representatives also. His most important (sixth) chapter, is dedicated to the “Crania of the Greeks,” and contains a greater amount of information than was ever before collected together upon this subject. He first of all directs full attention to all writers who have preceded him, beginning with the beautiful ancient calvarium of Blumenbach, mentioning those of Orioli, of Retzius, Prichard, Carus, Vrolik, Cordier, Pruner-Bey and Williamson. He next enumerates the ample materials he has amassed for his studies: skulls, ancient and modern, photographs, and measurements, and is especially observant of those who have aided him in collecting together these data, which he has sought with so much diligence. His own collection is rich in modern Greek crania, comprising no less than seven, the majority from the Islands. The entire amount of skulls in different museums, to which he is able to refer and of which he has got the measurements, is forty-four. Of these twenty-six are ancient and eighteen modern. The metrological data are given in two carefully prepared tables. After passing in review the principle of classification laid down by Retzius, and the various modifications of it which have been proposed by different writers of late years, he decides to make three sections upon this plan, which he regards as more than sufficient, and the only ones worth notice. He defines them thus:—

1. Dolichocephali; those skulls in which the cephalic index does not exceed seventy-four *per cent*.
2. Orthocephali; those in which the cephalic index is comprised between seventy-five and seventy-nine *per cent*.
3. Brachycephali; those in which it reaches eighty or more *per cent*.

Retzius had already concluded from his observations that the Hellenes were dolichocephalic; the Pelasgi and the Slavic people, to whom

* P. V. Zecchini, *Quadri della Grecia Moderna*. Venezia, 1866, p. 275.

he regarded the greater part of the modern population to belong, brachycephalic.

Dr. Nicolucci gives the following luminous description of the Greek skull :—

“The Greek cranium generally presents to the eye regularity and harmony in all its parts. Gentle is the curve which circumscribes the calvarium from the root of the nose to the occipital protuberance ; wide, but not very high, the forehead, which is ordinarily inclined backwards in its superior third ; the frontal tuberosities are but little visible, whilst, on the contrary, the frontal sinuses are always more or less apparent ; the root of the nose is but little depressed, and sometimes its bridge continues almost in the same line with the forehead. The straight orbits are rounded outwardly ; the forehead is slightly swollen about the temples, whence the temporal fossæ are deep, the malar bones ordinarily small, and the zygomatic arches but little prominent. The upper maxillary is orthognathous, and furnished with teeth implanted vertically ; the lower rather high and robust, but the rami are delicate and narrow, the external angle obtuse, the chin almost upright. The face is more or less oval, with an evident predominance of the upper region over the lower. That which distinguishes the Greek skull, in my opinion, is the form of the calvarium gently rounding in its anterior part, the feminineness, it might be said, of its malar bones, the narrowness of the lower jaw and the perfect orthognathism. These peculiarities give to the Greek cranium a stamp which distinguishes it at the first view from those of all other races, and we also perceive them to be the groundwork of those types of Greek art which we admire in our collections.” (P. 62.) This latter remark confirms the observations of Blumenbach.

On another page, Dr. Nicolucci tells us the Greeks were used to regard the dolichocephalic form as typical of beauty, and bestowed it on the figures of their gods and heroes : Jove, Pallas, Mercury, Venus, Artemis, the Graces, the Muses, Apollo, and all the series of Greek divinities are represented with that form of head which is conjoined with a dolichocephalic cranium ; a form which we likewise see in Niobe, Ariadne, Meleager, Helen, Esculapius, and others. It is found equally in the heads of the great men of Greece, whose likenesses are still extant, as Miltiades, Æschylus, Sophocles, Euripides, Demosthenes, Pericles, Aristotle, and so many others, whose effigies we admire in the statues, busts, and heads which adorn our museums.

“The above are the characters which generally belong to the Greek dolichocephalic skull, which is truly the head proper to the race, because the greater part of the Hellenic crania dispose themselves under this category ; but not the less may it be said that brachycephali exist ; for, as they are met with among the moderns, they were also not unknown among the ancient inhabitants of Greece ; and, in fact, among twenty-six ancient Hellenic skulls two are found

to belong to the brachycephalic class. One of these proceeds from Attica (the plain of Marathon), the other from Corfu." (P. 63.)

The major part of the brachycephalic crania of the modern Greeks of our author's table are from Epirus, inhabited in the most remote times by Pelasgic tribes, or barbarians of various names, and bordering upon Illyricum, Macedonia, and the Ambracian Gulf. The Hellenic elements were only sparsely scattered in Epirus, and never became predominant over the natives, who always represented and still represent the ethnic base of the Epirotic population.

The author tells us that the Greek artists employed the brachycephalic form, which always existed in a minority of the people, for the representation of figures in which material force and courage prevailed, where the physical faculties predominated rather than the intellectual. He refers especially to the Farnese Hercules, as an excellent model of this type: the personification of strength and vigour of limbs. It was the work of Glycon, an Athenian sculptor, who is believed to have lived in the period between Lysippus and the first Roman emperors.

But it is time that we should close this notice of Dr. Nicolucci's admirable work, the pages of which are filled with varied learning and the most mature judgment. Whether from the noble subject, or the great ability displayed in its treatment, this appears to us to be the most attractive and the most elaborate essay contributed by its author towards the great ethnographical design he has formed. To give anything like an analysis of its contents is impossible within a moderate compass; every page is deserving of special attention, and will recompense a careful study. For that portion we have not yet touched, we will avail ourselves of the lucid summary of Dr. Nicolucci with which he concludes his *Memoir*. The chapter entitled "Conclusion" terminates thus:—

"In the southern part of the continent and in the Isles, where the dolichocephalic element prevails, Greek is spoken; in the northern, where the brachycephali have acquired predominance, they speak Albanian. Acarnania and Thessaly are the limits of the two different tongues.

"The physical aspect of the Greek of the present day need not at all envy the finest types which were represented so marvellously by antique art in its splendid productions; nor are the moral characters of the present day very different from what they were in the happiest times of Greece. It is an error to say that the Greeks are lost in the ruin of their monuments, and that in their place a degraded people has arisen who retain scarcely any of the blood or of the genius of the ancient Greek men. Anthropology, sustained by numerous facts, rises up against these depreciatory words, and proclaims the Greeks of to-day legitimate descendants of that people who filled the world with its name and its glory, and was the model for all times of every

excellence, not only in knowledge, in letters, and in the fine arts, but of the most exalted civic virtue." (P. 96.)

This is the usual, almost general conclusion of anthropological inquiries in all countries, where they are conducted in a free manner and are not restricted by the requirements of any hypothetical or systematic notions, and where they are sufficiently thorough and complete to be deserving of confidence.

The fine well-executed Tables afford figures of the heads of the Venus de' Medici and the Farnese Hercules, as representatives of the two types of the dolichocephalic and brachycephalic Greeks. These are followed by a large series of crania of ancient and modern Greeks, so as to present a tolerably complete iconography of Greek skulls.

We cannot part with Dr. Nicolucci's *Anthropology of Greece* without expressing an earnest desire that we may again meet with fresh contributions from his vigorous and accomplished pen, in furtherance of the great problem the solution of which he has proposed to himself.

J. B. D.

KNOX ON THE CELTIC RACE.

WHETHER we turn our eyes to the Continent, to Ireland, or America, the present threatening attitude of the Celtic races gives a special significance to the views enunciated by the late eminent anthropologist, whose name we have placed at the head of the article. Although Knox perhaps generalised too much, and allowed his great partiality for epigram and satire, to hurry him beyond the sobriety which appertains to science, into real or apparent inconsistencies, we believe that his views are, on the whole, sound. He certainly had the merit of placing those views honestly and openly before the reader, often without the slightest mental reservation; and, so far, he has set a good example to scientific men. Even when we dispute his conclusions, when we question the good taste of the frequent political allusions in which he indulged, we cannot help admiring his moral courage. He apparently takes for his motto the pithy saying of Voltaire: "Un des plus grands malheurs des honnêtes gens, c'est qu'ils sont des lâches." He undoubtedly thoroughly weighed and appreciated the salient characteristics of the various races, and depicts them with a fidelity and

minuteness which showed the task to be a labour of love ; and none more so than the fine race of whose character we give the following brilliant synopsis.

Whether the Celtic race be represented by Frenchman, Irishman, Scottish Highlander, or Welshman, it is precisely the same. Civilization and education may modify ; religious formula is the result of race ; morals, actions, feelings, etc., flow surely from physical structure, which never varies. Why should it vary ? Behold the Celtic race long before the Roman conquest, overflowing its barriers, crossing the Alps, and making settlements in Northern Italy (Gallia Cisalpina), sacking Rome, invading Greece, and plundering Delphi. War, plunder, bloodshed, violence, in which the race delights, was their object. From Brennus to Napoleon the Celtic war-cry was, and is, "To the Alps—to the Rhine". This has been continuous for nearly four thousand years ; war being the apparent chief aim to which the Celt is born. Herein is the forte of his physical and moral character : in stature and weight as a race, inferior to the Saxon ; limbs muscular and vigorous ; torso and arms seldom attaining any very large development ; hence extreme rarity of athleteæ ; hands broad, fingers square at the points ; step elastic and springy ; and surpassing in muscular energy and rapidity of action all European races. Weight for weight, age for age, stature for stature—the strongest of men. His natural weapon is the sword. Jealous on the point of honour : possessing extreme self-respect ; admitting of no practical jokes ; an admirer of beauty of colour and of form ; a liberal patron of the fine arts. Inventive, imaginative, and fond of literature. His taste is excellent, though inferior to the Italian and the Slavonian and Peninsular races. His musical ear is tolerably good ; in literature and science he follows method and order, and uniformly acts upon a principle ; but in ordinary affairs of life, order, economy, and cleanliness are despised by him ; he gives no thought to the morrow ; holding unremitting, steady labour in contempt. He is irascible, warm-hearted, brave, full of deep sympathies, a dreamer on the past, but uncertain and treacherous. (*Races of Men*, pp. 318, 319, 320.)

The Celts are still in war the dominant race of the earth. Twice they saved Europe and the Saxon race from overwhelming destruction by defeating Attila and the Saracens. The Celtic race may be once more called on to decide by the sword the oft-renewed contest ; shall brute force represented by the East, by Moscow, succeed in extinguishing the political influence of Celtic and Saxon races in Europe. Despisers of the peaceful arts, labour, order, and the law, it is fortunate for mankind that the Celtic race is, like the Saxon, broken up into fragments. The leading clan is the Gallic Celt. Next in numbers is the Hibernian Celts ; then, the Cimbric, or Welsh ; lastly, the Caledonian.

In Canada are the *Habitans*, Celtic to the core, as when they first left France. In the Free States of North America the Hibernian and Scoto-Celt abound. Change of government, change of climate, has not altered them. Children of the mist, even in the clear and broad sunshine of day they dream of the past—Nature's antiquaries; anticipating the darkening future which they cannot, if they would, scan, by the banks of the noble Shannon, or listening to the wild roar of the ocean surf as it breaks on the Gizna Briggs, washing the Morachmore, or listlessly wandering by the dark and stormy coast of Dornoch, with gaunt famine behind them, no hopes of to-morrow, and cast loose from the miserable patch he held from his ancestry, the dreamy Celt, the seer of second sight, still clinging to the past, exclaims on quitting the horrid land of his birth, "We'll may be return to Lochaber no more". (Pp. 522-23.)

Why does the wretched man cling to the filthy hovel and the scanty patch of ground? Chroniclers of events, like Macaulay, blame his religion as being the cause; but it is natural to his race. The Celt clings with pertinacity to his patch of ground, because he has no self-confidence, no innate courage to meet the forest or the desert; without a leader he feels he is lost. He is entirely wanting in those qualities of enterprise and self-reliance which make the Saxon *par excellence* the coloniser of the globe. The Saxon goes abroad, settles, throws off his allegiance to his native country, and sets up for himself. He kills or drives into the interior the native races, makes a pretence of converting and civilising them by means of the Bible and cannon-balls, rum and religion, and then coolly adopts the name of the land which is the scene of his exploits. The Celt likes to live in a town or hamlet; while the Saxon builds a house as far as possible from his neighbour. With the Saxon, all is order, wealth, comfort; with the Celt, disorder, riot, destruction, waste. How tender are the feelings of the Celtic woman—how soft and gentle is her nature! Her tears flow at every tale of distress; but her children are in rags. (Pp. 323-24.)

This view appears to be supported by the graphic portraiture of the Caledonian Celt in the novels of Sir Walter Scott. Although not an anthropologist by name, the great novelist has traced with a masterly hand, racial portraits which are invaluable to the student of anthropological science. The French said of him that he wrote "novels like history, and history like novels."* We need not, therefore, be sur-

* To those who may think it beneath the dignity of anthropology to study that science in works of fiction, we may plead the example of Mr. David Mackintosh, who observes, in a note to his "Comparative Anthropology of England and Wales," (*Anthrop. Review*, Jan. 1866), "Of this I was assured some years ago, by the very eminent, though not professed anthropologist, Sir E. B. Lytton, several of whose novels might justly be styled *studies in anthropology*."

prised if such a profound observer of human nature should have keenly perceived and faithfully delineated those marked contrasts which separate the highland from the lowland Scotch.

"To me," Knox has observed, "the Caledonian Celt of *Scotland* appears a race as distinct from the lowland Saxon of the same country as any two races can possibly be ; as negro from American, Hottentot from Caffre, Esquimaux from Saxon." Yet the great lexicographer travelled to the Hebrides without perceiving that he had come into contact with a distinct race. Dr. Johnson was not much of an anthropologist. His knowledge of philology might, however, have suggested the important distinction between Celt and Saxon. Philologists are generally keen observers of racial characteristics beyond their own province of words. Possibly the literary colossus, like a good many of the present day, judged it prudent to say as little as possible about those awkward racial distinctions which neither theologians nor statesmen, no, not even an Act of Parliament can remove. The policy of the day seems to be to go on never minding, ignoring all unpleasant questions, a beautiful illustration of "masterly inaction." "Let us rest and be thankful." But suppose the belligerent instincts of certain races will not permit us to rest ! How thoroughly is the character of the Caledonian Celt embodied in these words—the last dying charge of Ranaid of the mist to his youthful grandson ! (*Legend of Montrose*). Like the expiring David, Ranaid has bequeathed to his relative a legacy of bloodshed :—

"Now depart, beloved son of my best beloved ! I shall never more see thy face, nor hear the light sound of thy footstep ; yet tarry an instant and hear my last charge. Remember the fate of our race, and quit not the ancient manners of the Children of the Mist. We are now a straggling handful, driven from every vale by the sword of every clan, who rule in the possessions where their forefathers hewed the wood and drew the water for ours. But in the thicket of the wilderness, and in the mist of the mountain, Kenneth, son of Eracht, keep thou unsoiled the freedom which I leave thee as a birthright. Barter it not, neither for the rich garment, nor for the stone roof, nor for the covered board, nor for the couch of down—on the rock or in the valley, in abundance or in famine—in the leafy summer, and in the days of the iron winter—Son of the Mist ! be free as thy forefathers. Own no lord—receive no law—take no hire—give no stipend—build no hut—enclose no pasture—sow no grain ; let the deer of the mountain be thy flocks and herds—if these fail thee, prey upon the goods of our oppressors—of the Saxons, and of such Gael as are Saxons in their souls, valuing herds and flocks more than honour and freedom. Remember those who have done kindness to our race, and pay their services with thy blood, should the hour require it. If a Mac Ian shall come to thee with the head of the king's son in his hand, shelter him, though the avenging army of the father were be-

hind him ; for in Glencoe and Ardnamurchan we have dwelt in peace in the years that have gone by. The sons of Diarmid—the race of Darlinvarach—the riders of Menteith—my curse on thy head, Child of the Mist, if thou spare one of those names when the time shall offer for cutting them off ! Once more, begone ! shake the dust from thy feet against the habitations of men, whether bonded together for peace or for war. Farewell, beloved ! and mayst thou die like thy forefathers, ere infirmity, disease, or age shall break thy spirit. Begone !—begone !—live free—requite kindness—avenge the injuries of thy race !”

The young savage stooped and kissed the brow of his dying parent ; but accustomed from infancy to suppress every exterior sign of emotion, parted without tear or adieu, etc. To the advice of Major Dalgetty (the inimitable representative of the lowland Scotchman, canny and cautious, the very antipodes to Celtic Ronald in everything but courage), that he should endeavour to make a Christian end, the dying man only answers by the following apostrophe : “ Spirit of the Mist ! called by our race our father and our preserver—receive into thy tabernacle of clouds, when this pang is over, him whom in life thou hast so often sheltered.” Major Dalgetty shrewdly opines that his friend Ranald is in his heart little better than a heathen. To die breathing slaughter and revenge against one’s enemies is certainly not the death of a Christian. A curious coincidence, also illustrative of race, may be found in the closing moments of a celebrated Irishman—Grattan, if the anecdote be true, that almost his last words to his son were—“ Be always ready with the pistol.”

These contrasts of racial character between Lowland and Highland Scottishmen abound in Sir Walter Scott’s novels. Where, for example, could a greater contrast in character be found than in Rob Roy and Bailie Nicol Jarvie, Dougal and Andrew Fairservice ? Yet nine hundred and ninety-nine out of a thousand English persons believe that all four representatives of Scottish character belong to one race. Did space permit, we could cite many illustrations of clearly-defined contrasts between the two races, which might be interesting to the anthropologist. Yet the bulk of the English to this day have not learned that there are two races in Scotland. All the natives of the country beyond the Tweed are classed together as Scotch. Mr. Bright, in his recent speech at Birmingham, utterly ignores any distinction between Celt and Saxon. He said :—“ Scotland is a nation, and I think, on the whole, more national than the Irish ; but Scotland is a member of a greater nation with which she is content. Well, Ireland is also a nation. I want to know why we cannot make Ireland also content to be a portion of a greater nation, and to take her share in that greater renown which attaches to a greater power ?”

In these words Mr. Bright utterly ignores the fact that in Ireland the great majority of the population is Celtic, while the Celtic inhabitants of the Scottish Highlands are now reduced to about 150,000. Knox has remarked that, "An English clergyman, an Oxonian, a gentleman and a scholar, remarked to him, 'So, then it does really appear that there are two distinct races of men in Scotland!' He had just made this notable discovery in the columns of the *Times*. The journalist had also just discovered the fact, and had actually had the courage to infer, that there might also be two races in Ireland! A reporter had been sent to Ireland to verify this astounding fact. Profound observer! Why did he pass St. Giles's, Marylebone, Whitechapel?" It was then actually conceded that there *were* two races in Scotland. But like Molière's *Médecin malgré lui*, we can say, "*Nous avons changé tout cela.*" Knox continues:—"True to his trade, the editor, within a year, throws this fact, and all its consequences, overboard; describes the Celtic rebellion of Scotland as a national rebellion of Scotland against England; knowing, at the same time, that there was scarcely a Scottish man, properly speaking, in the Stuart army."* Even those who, in their slavery to ignorance and prejudice, sneer at the bare mention of the word Anthropology, are unable to deny the significance of historical facts which attest the warlike power of the Celtic race and their strong attachment to a principle. Our sovereigns, though in prosperity sharing in the English prejudice which could see only the faults and failings and none of the good qualities of the Scoto and Hibernian Celts, have in the hour of adversity acknowledged those good qualities and turned them to account. James II, deposed and exiled from England, was glad enough to appeal to the loyalty and patriotism of the Irish nation, and had he not retreated at the battle of the Boyne, and fled back to France, the loyal Irish would, in all probability, have replaced him on the throne. Again, in 1715 and 1745, the rebellion of the Highland clans showed the warlike nature of the Scoto-Celt. On the latter occasion, the Highlanders, led by Prince Charles Edward, advanced into England as far as Derby. It is said that George II at one time meditated abandoning his throne and flying to the continent. Had this event taken place, the Catholic adherents of the Stuarts would have crowded to the standard of the Pretender. The dynasty, Government, and religion of Great Britain might have been again changed, the old faith restored, and the Ritualists might now be able to say with the frozen-out gardeners, "We've got no work to do!" "The Caledonian Celtic race," writes Knox, "not Scotland, fell at Culloden, never more to rise; the Boyne was the Waterloo of Celtic Ireland."

* Introduction, p. 15, *Races of Men*.

Let us return to our author's chapter on the Celtic character. "The Celtic race presents the two extremes of what is called civilised man ; in Paris we find the one, in Ireland, at Skibbereen and Derrynane, the other." Bishop Berkeley, in his *Querist*, 1735, speaks of "our Irish natives" as having fallen into a cynical content in dirt and beggary, which they possess to a degree beyond any other people in Christendom. It is he who asks, on his return from America, "Whether our old native Irish are yet civilised, and whether their habitations and furniture are not more sordid than those of the savage Americans."* "Civilised man cannot sink lower than at Derrynane, but civilised man may perhaps soar higher even than in Paris ; however, of this I am not quite sure. Beer-drinking, smoky London, with its vaults and gin-shops, its Vauxhalls and Cremornes, its single gay street, and splash of a short season, cannot be compared with Paris." We should think not, and can sympathise with the complacent affectation of superiority with which the Gaul, escaped from "Perfidious Albion," points out Paris to the stranger with the formula : "*Monsieur, voila le centre de la civilisation.*" "As a race, the Celt has no literature, nor any printed books in his original language. Celtic Wales, Ireland, and Scotland, are in profound ignorance. There never was any Celtic language, nor science, nor arts ; these the modern French Celt has borrowed from the Roman and the Greek" (pp. 324-25).

In his speech already referred to, Mr. Bright said, still carefully ignoring all racial distinctions :—"They are in Ireland really the same people as ourselves.† We all speak the same language, we read the

* Mr. Peter Fox *On the History of the English Colony in Ireland.*

† The same people as ourselves ! How astonishing then that the Irish will not accept peaceably the laws, government, and constitution which satisfy the English ! That they have been for seven hundred years attempting to throw off the Saxon yoke ! That the antipathy between the lower orders of Irish and English is proverbial—a matter of common observation. How long will politicians continue to sing the same song, "Oh no, we never mention race" ? But if the views of an anthropologist like Knor be unpalatable, let us take this plain summary of facts from the new work of Mr. Mill, who, so far as we know, utterly ignores the fundamental cause of all the trouble, *distinction of race*. He thus describes the surprise of Fenianism—"Repressed by force in Ireland itself, the rebellion visits us in our own homes, scattering death among those who have given no provocation but that of being English-born. So deadly is the hatred, that it will run all risks merely to do us harm, with little or no prospect of any consequent good to itself. Our rulers are helpless to deal with the new outburst of enmity, because they are unable to see that anything on their part has given cause for it. They are brought face to face with a spirit which will as little tolerate what we think our good government as our bad, and they have not been trained to manage problems of that difficulty. But although their statesmanship is at present at fault, their conscience is at ease, because the rebellion, they think, is not

same books, and the Irish write a great deal of literature which we read in England." An ignorant person listening to this would naturally conclude that the Irish never had a language of their own, which they still use among themselves, while speaking English to the stranger. But the fact of the prevalence of the English language cannot remove the distinction of race. A Frenchman does not become an Englishman because he learns our language. If our American cousins, men of our own race, who have not had already an independent political existence for one hundred years, be so changed in spite of the common ties of language, religion, laws, institutions, literature, etc., that we call them another nation, and even try to consider them a distinct *race*, what is the worth of the argument that the Irish speak the English language? How does that fact affect race?

Knox notices the superiority of the French in literature, science, and the fine arts. The qualities of race which make them cling together in clans in a barbarous condition, is illustrated in the civilised state by centralisation, a paternal government, a marvellous power of acting in unison and combination, producing results which seem utterly impossible in England. "Their academy has no equal anywhere. They build the best ships but cannot man them: they are no sailors. In taste they can never sink to the low level of the Saxon race, whom it is almost impossible to maintain at even a respectable standard." Hence, our fruitless efforts to form a national system of education, to found literary and philosophical societies, etc., such institutions displaying in their constitution the besetting evil tendency of the Saxon mind—division, disunion, jobs.* "All over the world the Celtic race is, properly speaking, Catholic, even when not Roman; for instance, France is thoroughly Roman Catholic; so is Ireland and Canada; in Wales and in Caledonia they still hold their ground. The Reformed Celts have never joined the Churches 'as by law established.' The Saxon accepts his religion from the lawyers; the Celt will not. The Welsh and Caledonian Celt are strictly evangelical." The following statement does not seem to us strictly true:—"The horrible degradation of the Celtic population of Ireland may

one of grievance or suffering; it is a rebellion for an idea—the idea of nationality. Alas for the self-complacent ignorance of irresponsible rulers, be they monarchs, classes, or nations. If there is anything sadder than the calamity itself, it is the unmistakable sincerity and good faith with which numbers of Englishmen confess themselves incapable of comprehending it."

* *Abait omen*, as regards the future of the Anthropological Society. Shall we endeavour to leaven the Saxon by a strong infusion of the Celtic element? Or shall we, by a noble emulation of our Celtic anthropological brethren across the channel, prove that exception may be taken in this instance to Knox's generalisations?

perhaps be best judged of by this one fact : that they are not aware of the existence of forty millions of *the same race* within two days' sail of their shores. Ignorance is a dreadful thing !" (pp. 326-328). The French expeditions dispatched to Ireland during the insurrection in 1796 and 1798 ; recent organisations and political agitations directed by Irishmen in France ; the number of Irishmen of family who have taken service in the French armies, are all indications of mutual sympathy founded on the perception of unity of race.

The great revolution and the periodical political convulsions of France, the frequency of which caused a witty German (Heine, we think) never to go abroad without leaving directions where he was to be found, in case they sent to offer him the crown of France, are ascribed by Knox mainly to the land-question, consequent on the erroneous nature of the Celtic mind in respect of true liberty, freedom, equality, etc. He contrasts the Saxon ideas on this head with those of the Celt :—" From time immemorial the land belonged to the chief ; the clan was entitled to live on it, it is true, but it did not in any way belong to them. By degrees nearly all the soil of France came into the possession of the crown and court, the clergy and the high aristocracy. A nation without land became, of course, a nation of slaves. Then burst forth that mighty revolution which shook the world, whose effects must endure for ever. Court, clergy, and gentry were swept into the ocean. But did the Celt thereby put the land-question on a right footing ? Not in the least. He created merely another class of landed proprietors—an immense body of men of matchless ignorance and indolence, mostly sunk in hopeless poverty. He abolished the law of primogeniture, it is true, but he had not the soul to rise up to the principle of abstract justice. Restore the land to the community ! Put it up for sale to the highest bidder ! Divide the amount raised amongst your heirs ! You have no more right to appropriate this piece of land to your family than had the ancient noblesse of France ! But you have no individual self-reliance, and so you divide and subdivide the patch of land left you by your forefathers, until your condition becomes scarcely superior to the hog who shares it with you. To sell the land ; to divide the proceeds amongst the family ; to accept of your share, and plunge boldly into the great game of life, is a step you dare not take. You are not deficient in courage ; no braver race exists on the earth ; but you have no industry, no self-reliance, no confidence in your individual exertions " (pp. 329, 330).

Knox is distinctly of opinion that the Saxon is the only race which understands constitutional freedom, consequently the only race which can establish democratic institutions. These he considers totally antagonistic to the genius of the Celt.

"Four times within the memory of man has the Celtic race of man in France acquired their absolute freedom. Four times they have betrayed the hopes of mankind. No trust can any longer be placed in them. Look at the Celtic man in Canada, Wales, Scotland, United States, Paris—it is always the same; he does not know the meaning of rational liberty. Look at Paris. After a revolution the most complete, the most successful, the most daring the world ever beheld; the dynasties of Europe from St. James's to Moscow struck dumb; aware of their extreme danger but afraid to move; the very *Times* itself shrinking into nothing with alarm and fear. Now visit Paris! A fortified camp, espionage, police, gendarmes, passports, all in full force: the reign of Napoleon was a farce to this terrible mockery." (P. 373.)

Modern theories of miscegenation as applied to the white man and the negro would have roused the indignation of Knox, who always denies the amalgamation of the white races which occupy Europe. He said:—

"Seven hundred years of absolute possession has not advanced by a single step the amalgamation of the Irish Celt with the Saxon English: the Cymbri of Wales remain as they were; the Caledonian still lingers in diminished numbers but unaltered, on the wild shores of his lochs and friths, scraping a miserable subsistence from the narrow patch of soil left him by the stern climate of his native land. Transplant him to another climate, a brighter sky, a greater field, free from the trammels of artificial life, the harnessed routine of European civilisation, carry him to Canada, *he is still the same*; mysterious fact. I beseech you, you great essayists, Utopians, universalists; and shrewd fatalist statesmen, to explain the facts if you can; if not why not admit them to exist. The habitants, le Bas Canadian is a being of the age of Louis Quatorze, seignories, monkeries, Jesuits, grand domains, idleness, indolence, slavery: a mental slavery, the most dreadful of all human conditions. See him cling to the banks of rivers, fearing to plunge into the forest; without self-reliance; without self-confidence. If you seek an explanation, go back to France, go back to Ireland, and you will find it there; it is the race. Even in the United States, where if a man remain a slave in mind it is his own fault, the Celt is distinct from the Saxon to this day." (P. 18, Introduction.)

Knox laughed at the idea of climate, institutions, government, etc., altering the race. He pointed out that the independent institutions of various races are an effect not a cause. Few, we think, will dispute that as races were in existence before human institutions, it is the race which determines the institutions. He says "Race is everything. Seignories and monkeries, nunneries and feudality, do not form, neither do they modify, the character of any people; they are an *effect* not a *cause*, let *chroniclers* (Macaulay) say what they will. They indicate the character of a race—they do not form that character." (P. 131.) He makes merry with the theory of Hippocrates, endorsed by

Buffon and recently by others, that climate has produced the various racial distinctions. He denies that external circumstances, nature of the soil, locality, etc., or that peculiar customs, such as mechanical pressure applied to the head in infancy, can produce permanent distinctions in type. Referring to the gossip of Herodotus about the cause of the Egyptian hard skulls and the Persian soft skulls, he thinks "Herodotus must have studied medicine ; he gives a reason in such a pleasant off-hand way for all natural phenomena." He also observes that in America "the races darken as we approach the poles ; the eternal snows, which ought to have whitened them, according to the theorists from Hippocrates to Barton Smith, have failed to bleach them." Advocates of the climatic theory of colour say that intense cold darkens as well as great heat.

"Climate," again remarked Knox, and we cordially agree with him, "has no influence in permanently altering the varieties of the races of men ; destroy them it may and does, but it cannot convert them into any other race ; nor can this be done even by act of parliament, which to a thorough-going Englishman, with all his amusing nationalities, will appear as something amazing. It has been tried in Wales, in Ireland, in Caledonia—and failed. Explain it, ye Utopians, as you choose ; I merely mention the fact. When I lectured at Liverpool, a gentleman of the name of Martineau put forth a discourse, in which he maintained that we had forced Saxon laws upon the Irish too hurriedly ; that we had not given them time enough to become good Saxons, into which they would be metamorphosed at last. In what time, Mr. Martineau, do you expect this notable change ? The experiment has been going on already for seven hundred years. I will concede you seven times seven hundred more, but this will not alter the Celt ; neither will it change the Saxon." (P. 53.)

From this we may see that Mr. Bright, when he says "they are in Ireland really the same people as ourselves", differs *toto cœlo* from Dr. Knox. One or the other must be wrong, and, to our mind, Dr. Knox was the greater anthropologist. As we have contrasted the anthropological ideas of the politician and the man of science, the following statements of Knox are *à propos*. Applying his racial views to the actual condition of Ireland, he thought that,—

"Under a bold military leader they might have driven out the Norman rule and recovered their freedom, for the English are quite aware that Ireland is not a colony, but merely a country held by force of arms, like India ; a country inhabited by another race. They are aware, too, that in point of fact it is merely a fief of the reigning dynasty and a few of the noblesse ; they would not, *for them*, support a long and unprofitable war ; so that Celtic Ireland might have recovered her nationality by a single well-fought action. But she would not have recovered her liberty. Rome was there, and O'Connell, and a thousand influential haters of true liberty. Allowing, which was probable enough, that,

carrying out the destinies of their race, after driving the Norman oppressor from their soil, young Ireland had risen, and, imitating their brethren in France, had pushed at the point of the bayonet from out the soil of Ireland, the abhorred demagogue and his fiend-like church ; still, as a Celtic race, they must either have fallen into the hands of a military leader, or relapsed into a state of barbarism similar to the Caledonian Celt prior to 1745.* (P. 375.)

In the following passage he advances his views of antiquity of race to extremes :—

“The really momentous question for England, as a *nation*, is the presence of three sections of the Celtic race still on her soil: the Caledonian, or Gael ; the Cymbri, or Welsh ; and the Irish, or Erse ; and how to dispose of them. The Caledonian Celt touches the end of his career : they are reduced to about 150,000 ; the Welsh Celts are not troublesome, but might easily become so ; the Irish Celt is the most to be dreaded. It was natural for an amiable man of a vigorous understanding, great energy and courage (I allude to Mr. John Bright)† to ascribe Irish misery to the misrule of her race, and to trace this misrule not to the Irish people, but to the imbecile, treacherous, and disastrous government of her Norman dynasty and Norman nobility ; of a corporate body of foreigners, who would still fain look on England *as theirs by right of conquest*, and on the soil of Ireland as a mere hunting-ground for the recreation and profit of the mighty barons. But Mr. Bright is, in the main, in error. The Norman government of England has, it is true, done its best and its worst in Ireland. If you wish to see what such a dynasty can do, go to Ireland ; still, the source of all evil lies in *the race*—the Celtic race of Ireland. There is no getting over *historical facts*. Look at Wales ; look at Caledonia ; it is ever the same. The race must be forced from the soil ; by fair means, if possible ; still they must leave. England's safety requires it. I speak not of the justice of the cause ; nations must ever act as Machiavelli advised ; look to yourself. The Orange Club of Ireland is a Saxon confederation for the clearing the land of all Papists and Jacobites : this means Celts. If left to themselves,

* These views of Knox are supported by the following extract from Mr. Mill's work, *England and Ireland*, just published :—“An age when delegates of working men meet in European Congresses to concert united action for the interests of labour is not one in which labourers will cut down labourers at other people's bidding. The time is come when the democracy of one country will join hands with the democracy of another rather than back their own ruling authorities in putting it down. I shall not believe until I see it proved that the English and Scotch people are capable of the folly and wickedness of carrying fire and sword over Ireland in order that their rulers may govern contrary to the will of the Irish people.”

† In the *Essay on Africa*, Dr. Knox writes of Mr. Bright, as “the most distinguished orator of the day.” We draw attention to this as proof that the difference between the views of the late celebrated anthropologist and those of Mr. Bright on “the Irish question,” are not political, but scientific.

they would clear them out, as Cromwell proposed, by the sword; it would not require six weeks to accomplish the work. But the Encumbered Estates Relief Bill will do it better." (Pp. 378, 379.)

Knox appeared to let his pen run away with him here. Why should we despair of the union of morality and expediency in the affairs of nations as in individuals? Independently of the utter immorality of the course he recommended trying to solve the Irish difficulty, the following paragraph shows it to be impolitic on the lower ground of expediency, and forms a remarkable instance of the inconsistency, if not self-contradiction, into which Knox was sometimes led by his love of paradox.

"Then will come, a hundred years hence, a more momentous question for England: a *Saxon population* in Ireland will assuredly forget that they ever came from England; at all events, they will be *born in Ireland*, and their property is there, and that will be enough for them. Then will come the struggle of self; the Saxon against Saxon. A Saxon colony in Ireland! But long before that the tri-colour flag may wave over the United States of Great Britain and Ireland. This is the march of the Saxon onwards to democracy; self-government, self-rule; with him, self is everything." (P. 379.)

So that if Ireland populated by Saxons will be certain to throw off its allegiance to the British government, we cannot see the political gain of forcing the Irishman from the soil. In speaking of the oppression of the Norman government, Knox appears to forget that the republican form of government under Cromwell was far more oppressive and disastrous to the Irish people. The Protectorate of Cromwell was practically a policy of extirpation of the Irish, and the significant execration, "The curse of Cromwell," to this day perpetuates the memory of the massacres of Wexford and Drogheda.*

Some may point to Fenianism and the present condition of Ireland as a proof that there is actually a strong republican sympathy at this

* "When Cromwell sent his memorable despatch to the Long Parliament narrating his success at Drogheda, and how those to whom quarter had been promised, had been right gloriously burnt alive, the Long Parliament voted a thanksgiving day and thanks to Cromwell, with special approbation of the 'execution done at Drogheda.' English Protestants are fond of repeating how the Pope struck a medal in honour of the massacre of St. Bartholomew, but I have yet to meet the first one who has branded in becoming terms the conduct of the English Parliament on receiving news of the atrocity at Drogheda. In short, the whole conduct of the English Commonwealth towards the Irish nation was so sanguinary and remorseless, that more than any other episode of the relations between the two nations, it remains rooted in the memory of the victim nation, and rises up as an insuperable obstacle, *under present conditions*, to a reconciliation between the English and Irish people."—*History of the English Colony in Ireland*. By Peter Fox, Esq.

moment general among a Celtic people. The causes of this may be explained without in any way contradicting the views of Knox as to the genius of the Celtic race. We must remember that the misgovernment of centuries, consequent on the persistent ignoring of obvious racial distinctions between Irish and English, has led to the expatriation of the best blood and energy of Ireland. The scions of the old Irish families, the descendants of their ancient chiefs, those who should be the leaders and representatives of the race, are now to be found scattered throughout Europe, serving with distinction in the continental armies. Latterly, moreover, an immense exodus of the people has taken place, and is still going on. Mr. Train says there are in America ten millions of Irish. Possibly he is not the most reliable authority. We must define our terms when we speak of the Irish in America. According to the census returns of 1861, the number of Irish *natives* in the United States amounted to 1,611,304. But if we take the whole of the Irish colony, including not only emigrants from Ireland, but the descendants of Irish parents born and living in the United States, the numbers may not fall so far short of Mr. Train's estimate. Irish-American citizens naturally incline to sympathise with the political views of their adopted country. They have fought for the star-spangled banner of the Republic as their fellow countrymen fought for the British flag; and in either, or any service, no braver men can be found than those composing Irish regiments. Irishmen fight well in any cause. They illustrate the great quality of the Celtic race, the most warlike in the world. Hence, the republican sympathy imported by American-Irish to their brethren in Ireland, fed and sustained by disbanded Federal soldiers. So far, then, from this furnishing an argument against the character of the race as drawn by Knox, it is indeed a very strong confirmation of its truth. In America the Irish cling together; they do not, like the Saxon, settle down contented, and forget their native country. On the contrary, they combine to free their brethren in Ireland from the rule of the Saxon. If such a combination takes a form apparently actively opposed to the characteristics of the race—such, for example, as the declaration of an Irish republic—it is to be accounted for by the fact, that those who assert their self-appointed claim to be the representatives of the Irish people, have been bred in a republic, and are imbued with republican ideas. Fenianism is a temporary political agitation, utterly antagonistic to the genius of the Celtic race, illustrated in the patriarchal government of chiefs ruling over clans. A Celtic people must always have a leader, call him by what name you please,—chief, king, emperor, or sultan. Thackeray, who has left us some elaborate studies of Irish character in his novels, illustrated the clannish instinct of the

race when he said, "There never was a poor Irishman in London who had not a poorer Irishman hanging on to him."*

Time will show whether the Irish in America will ever heartily embrace the republican institutions developed by the Anglo-Saxon race. They live together and intermarry, cling together, vote together, influence the elections, and get up filibustering expeditions on their own account. They retain their own form of religion, and they will never willingly submit to a government antagonistic of race in America any more than in Europe. They are already showing themselves as troublesome to the Saxon race in America as to the Saxon race in England. And unless we are greatly mistaken, the future of the Irish Celt in America will triumphantly illustrate the truth of Knox's statements, that race never changes, and that race is everything in human affairs. The problem of uniting distinct races peaceably and contentedly under one form of government is the same in America as in Europe ;—possibly the difficulty may be found greater there than with us.†

Mr. Peter Fox, author of an elaborate and impartially-written essay on the English colony in Ireland (the only fault of which is that he does not give the race-question its full and proper weight and consideration), observes that it was the avowed policy of the statesmen of Elizabeth, Cromwell and Queen Anne, "to cut off the Irish head, allow its tail to live in the hardest conditions, and supply the trunk and tail with an English cranium." Consequently the Irish gentry fled to the continent.

"But the proper place for these O'Donnells, Taafes, Dillons, Macdonnells, MacMahons, Macarthys, and many others, ought to have been Ireland and not Spain, France, Lorrain, Savoy, and Austria. The Irish tail has, with becoming spirit, refused to accept the English head which the British government artificially joined on to it, and has developed for itself a head which, alas ! is not all that the well-wishers of Ireland desire for it."

Mr. James Higgin, F.A.S.L., has in a little pamphlet (*The Irish Government Difficulty considered as a Race Question*), in which, accepting views of race similar to those of Knox put forth by M. de Gobineau (*Moral and Intellectual Diversity of Races*), to the effect, "that different races have different lines to travel on in their developments,

* *Vide* Captain Costigan, and other Irish characters, in the excellent novel of *Pendennis*, which is quite anthropological in its delineations of the Irish Celt.

† While this is passing through the press, these views receive fresh confirmation. The journals report great riots in New York between Irish and German immigrants. Wherever there are Irish, fighting follows as a matter of course.

and that any attempt to force (or induce) them to adopt other ways generally produce discord and misfortune," advocated the practical application of these principles to the pacification of Ireland. He suggests that it might be advantageous to conciliate the two great sections of the population, of papists (Celts) in the South-West and Protestants (Saxons and Celtic-Saxons) in the North-East, by dividing the Island for the purpose of government, with reference especially to the race derivation of its people: the north-eastern part to be entirely assimilated with Great Britain, and treated as much as possible as if St. George's Channel did not exist: the south-western part to be governed by a viceroy appointed, responsible to the crown, chosen from one of their most respected old catholic noble families, with large administrative powers, and to be assisted by a council selected from the principal territorial families, by vote or otherwise, as might be decided. He observes—

"It is only one of the temporary misfortunes of the hour, that as in the present Fenian troubles, a mania for republicanism has developed itself. That is a form of government most alien to their instincts, and has only shown itself in this culmination of their troubles from the active aid brought them by those of their blood connected with the United States, and it may be noted that in that country the Celtic Irish race is recognised as rather an impediment than otherwise to the well-working of republican representative Institutions."

We commend these considerations as deserving the attention due to a practical suggestion emanating from one who forms an exception to the general rule of utterly ignoring all distinctions of race. We have tried that system for seven hundred years, and we have the present dead lock and suspension of constitutional government in Ireland. How much longer shall we go on with our complacent political tinkering? The Irish question is the question of the day. Everybody is offering suggestions, and it is owing to the steady stupidity with which John Bull persists in ignoring all racial distinctions that these suggestions are of such an impracticable and worthless character. Lord Stanley says most justly: "Do not let us call in quacks—do not let us fly to desperate remedies because the doctors cannot find out an instant and perfect cure for a disease which is of long standing." Surely it is the veriest quackery to pretend to prescribe without first making an accurate diagnosis of the disease. Ireland has long been politically sick, and a number of political doctors are fighting and squabbling about the efficacy of their respective drugs while the patient is dying. When any one ventures to hint that the patient is of a different race, and that the medical treatment which exactly suits the constitution of Britannia may be most detrimental to Erin, they unite in laughing the suggestion to scorn. When will our medicine men perceive that what suits Saxon

England will not suit Celtic Ireland? Let us call in an anthropological doctor. Let Dr. Knox instruct us from his grave. Let us put an end to the present political representation of the famous consultation of physicians satirised by Molière. If we persist in utterly ignoring the constitution of the patient,—the fact of Race, we are treating the Irish Celt in the cavalier fashion of M. Tomès, when he said, “Un homme mort n'est qu'un homme mort, et ne tire point à conséquence ; mais une formalité négligée porte un notable préjudice à tout le corps des-médecins.” We are now about teaching the people, our future governors, their letters. Would it not be well if the education movement could be extended—if our statesmen, our members of parliament, our bishops, clergy, the aristocracy of blood, and the aristocracy of wealth, the upper classes and *educated* people generally, could be induced to learn their anthropological alphabet ; if men called on to regulate the destiny of millions of human beings of divers races, only knew a very little of the nature of those races whom they govern—say about as much as intelligent schoolboys know of beetles, bull frogs, titmice, and tadpoles ? Then, instead of crying peace when there is no peace, instead of M.P.'s stumping the country and making statements which the merest tyro in anthropological science could refute, there might be some faint rational prospect of better times and peace to the world. Fenianism startled John Bull, and taught him that there may be after all, something in comparative anthropology. Recent events, and the actual existing crisis, prove that we can no longer with safety to ourselves, continue to ignore the vital question of distinction in races. We have received a significant practical commentary on the value of the views put forward in the *Races of Men*, and especially on that, a portion of which we are called on to govern—the great, warlike, warm-hearted Celtic race.

NILSSON ON THE STONE AGE IN SCANDINAVIA.*

ALTHOUGH Professor Nilsson's classical work on the prehistoric races of Scandinavia is well known in England by repute, it has hitherto remained a sealed book to the ordinary student, owing to the fact that the language in which it is written is so little cultivated amongst us. The German translation by Meissner of the volume on *The Bronze Age* has certainly rendered that portion of the work more

* *The Primitive Inhabitants of Scandinavia. An Essay on Comparative Ethnography, and a Contribution to the History of the Development of Mankind.* By Sven Nilsson. Third edition. Edited, and with an Introduction, by Sir John Lubbock, Bart. London : Longmans, Green, and Co., 1868.

generally accessible ; but until the publication of the present volume, the portion more especially interesting to the anthropologist has remained practically unknown out of Scandinavia, except through the medium of the extracts, published by Prof. Morlot, of Lausanne, from the manuscript German translation discovered by him in the University library at Schwerin.

The English work is not a mere translation, but really a new edition, prepared by the author himself. It appears under the editorship of Sir John Lubbock, a gentleman in many respects specially qualified to introduce the veteran Swedish naturalist and archæologist to the English scientific public. Whether, however, the editor has performed his task so fully and satisfactorily as the interest of the subject and his own deservedly high reputation demand, is a question upon which we entertain considerable doubt. In his preface, the editor remarks very truly, that "Had Professor Nilsson's object been to exalt his own reputation, he would have reprinted his book just as it stood when first published in 1838-43"; but Sir John Lubbock neglects to mention that, so recently as 1866, Prof. Nilsson did re-issue his book just as it stood when first published, adding to it, however, very full notes and appendices, bringing down to the date of republication the information on the various subjects treated of. The fact that Professor Nilsson, in preparing the third, or English edition of his book, has kept in view his reader's convenience rather than the increase of his own reputation, and has accordingly incorporated into the text the notes and appendices of the second edition, is to be attributed to his anxiety to advance, in every possible way, the science to which he has devoted himself for more than half a century ; but we think it was due to him that his editor, who in his address to the Archæological Institute in 1866, so ably vindicated the claims of prehistoric archæology, should have given some slight sketch of the author's influence on the progress of that science. The omission of such a tribute on the part of Sir John Lubbock is the more remarkable, as in the address referred to, which is reprinted as an Introduction to Prof. Nilsson's work, he acknowledges that "the progress recently made[in archæology] has been mainly due to the use of those methods which have been pursued with so much success in geology, zoology, and other kindred branches of science" (p. x, Editor's Introduction). So again at page xlii of this Introduction, the editor states his conviction, that it matters comparatively little if our present views are correct, if we are convinced that we are pursuing the right method in our researches. Considering, then, that to Nilsson is due the merit of applying this method twenty-five years ago, and not only of applying it, but of having enunciated the clearest and most philosophic views of its great

importance and value, we maintain that it was the duty of the editor to have pointed out the nature and extent of our obligations to one who has well earned the proud title of "The Cuvier of Archæology."

In the preface to the second (Swedish) edition, Prof. Nilsson devoted some four or five pages to a history of Swedish archæology during the last thirty years, with a view of showing the part performed by the Danes and Swedes respectively, in bringing the science of northern antiquities to its present state. This history, which is omitted from the first volume of the English edition for want of space, but may "perhaps" appear in the second volume (that on the *Bronze Age*), affords materials, when read in conjunction with Prof. Nilsson's other published works, for estimating the debt which science owes to him; and we have drawn from these sources the following account of Professor Nilsson's labours in the field of archaic anthropology.

We must first take our readers back to the winter of 1815-16, when Nilsson, then in his twenty-ninth year, was studying geology and anatomy in the city of Copenhagen. The now so celebrated Museum of Northern Antiquities was then quite unimportant, and was located in the University library in the Rundetorn. Nilsson, who was familiar with the more extensive Swedish collection in his own University of Lund, did not neglect to avail himself of such specimens as the Danish museum contained, and the study bore good fruit in after years. The late Prof. Thomsen, who shares with Nilsson the honour of having given that great impulse to the study of Scandinavian archæology which has resulted in the establishment of a science of archaic anthropology, was appointed to the curatorship of the Copenhagen Museum in 1816. He devoted himself with wonderful industry to the increase both of the antiquarian and ethnographical collections in Denmark, and although we cannot ascribe to him that division of pre-historic times into the three periods of stone, bronze, and iron which is regarded as the highest result of the study of Northern antiquities, to him undoubtedly belongs the merit of having been the first to divide a great collection of antiquities in accordance with those periods. The term "stone age," as applied to the most ancient period, was used even by Magnus Bruzelius in his *Antiquitates Boreales*; and Professor Geijer proposed the division of pre-historic times into stone, bronze and iron in his *Svenska Folkets Historia*, published in 1832, that is to say four years before Thomsen's *Ledeträad*. He says at p. 112, after referring to the great antiquity of the use of iron, "still older weapons are of copper or a metal mixed with copper; the oldest of stone." It is therefore neither to Thomsen nor to Nilsson that we owe the tripartite division of prehistoric times. To

Nilsson, however, belongs, as we shall presently show, the much greater honour of applying to the study of ancient races and their works that comparative method of investigation which has elevated this branch of inquiry to the dignity of a science. Nilsson returned to Sweden without having made the acquaintance of Thomsen, and without having even seen him as far as he knows.

It was not until he had been Professor of Zoology at Lund for twenty-two years, and had devoted a considerable portion of his time to archæological studies, that Nilsson produced his first essay in archaic anthropology. A new edition of his work on the birds of Scandinavia was issued in 1834, and the essay referred to was included in the introduction, under the heading of *Sketch of a History of Hunting and Fishing in Scandinavia*.

In this *Sketch* it was stated for the first time that the aborigines of Sweden were savages, in the sense in which that word is ordinarily used, and that they lived, as savages at the present day do, chiefly by hunting and fishing. The objects of stone found in ancient graves and turf-moors were described, and compared, as far as the materials available would allow, with those now used by the natives in North America, Greenland, and Australia; it being shown that the implements were not weapons of war and sacrificial knives as had been formerly supposed, but chiefly the everyday tools of a people in such a low grade of civilisation that they were unacquainted with metals. Details were also afforded of the nature of the localities in Scandinavia where flint implements had been found; and the remarkable resemblances between the ancient chambered tombs and funeral customs and those of an existing savage people insisted upon.

The History of Hunting and Fishing attracted considerable attention in the Scandinavian learned world. In Denmark and Norway it was translated and commented upon by Werlauff, Christie and Molbech. In Sweden it met with the approval of such men as Berzelius and Geijer.

Here, however, it is right to mention that two years previously Professor Thomsen had published in the *Nordisk Tidsskrift for Oldkyndighet*, a paper on the "Northern Antiquities of Stone from the Heathen Period," but Nilsson was in no way indebted to Thomsen for the views expressed in his *History of Hunting and Fishing*, as he only became acquainted with Thomsen's paper after his own work had been put into type. He had not seen the Danish collections since the year 1816.

The favourable reception which his first contribution to archæology met with at the hands of his scientific brethren induced Nilsson to undertake a separate and more elaborate work on the archaic anthro-

pology of the North. Previous to commencing it he found it necessary to obtain more extended material for comparison, and he therefore in 1836 visited the public museums in Copenhagen, London, Bristol and Paris, and also various private collections in other places abroad. He had already studied all the collections, both private and public, in the Scandinavian peninsula. In 1838 the first part of the new work appeared under the title of *The Primitive Inhabitants of the Scandinavian North*. The book was completed by the fourth part, published in 1843.

The preface (1838) to this first edition is not given in the English edition ; but the introduction (1843) is reproduced *verbatim*, with the exception of an unimportant alteration in the last paragraph ; and we would draw special attention to the broad philosophic spirit in which it is written and the firm grasp the writer shows of the method by which alone we can hope to discover the condition of man in ages before the dawn of history or tradition. He says (we quote from page lx of the English work) :—

“ If natural philosophy has been able to seek out in the earth and to discover the fragments of an animal kingdom, which perished long before man's appearance in the world, and, by comparing the same with existing organisms, to place them before us almost in a living state, then also ought this science [of pre-historic archæology or archaic anthropology] to be able, by availing itself of the same comparative method, to collect the remains of human races long since passed away, and of the works which they have left behind, to draw a parallel between them and similar ones, which still exist on earth, and thus cut out a way to the knowledge of circumstances which *have been*, by comparing them with those which still exist. It is by following this method that we shall begin to investigate this subject, during which however, we have at our command more elements for comparison than the geologist ; we have not only skeletons and skulls, but also implements, weapons, buildings, etc., all of which we shall compare with similar objects still existing and still in use. Farther on in our researches tradition and superstition meet us ; the latter a religious tradition although, like profane tradition, it has often forgotten its *real* signification. We shall avail ourselves of all these elements as means for facilitating our researches in order to reach the goal to which we aspire, namely, to contribute to the history of the intellectual and social development of the human race.”

This was written four and twenty years ago. The preface, written thirty years ago, is equally clear on the subject of method. It says, for example :—

“ I shall also, for the development of this question, make use of the same method as is now used in all divisions of natural history, namely the comparative method. Through its use naturalists have advanced to a certain and indubitable knowledge of an organic world

long since passed away ; the same method rightly used must also be able to afford us certain knowledge of the people which in this country lived and worked and disappeared before history began to speak in the North."

We have thought it due to Professor Nilsson to lay before our readers the foregoing retrospect of his important services to one of the most interesting branches of our science ; the editor of the English edition, than whom no one is more competent to perform the duty, having unaccountably omitted to render the just tribute to his venerable author.

We now proceed to notice the English edition itself. The general scheme of the work has become somewhat obscured by the incorporation of the additional matter necessary to bring the book down to the existing state of science. A reference to the original preface of 1838 will give the best idea of its scope and arrangement. Professor Nilsson there declares that his object in undertaking the present investigation was to answer the following questions :—

1. Is the so-called Gothic race which now inhabits the whole of the Scandinavian peninsula (with the exception of its northernmost part) and which is the only one history knows of here, the first and only one which inhabited this part of the North of Europe ? Or

2. Did the present race immigrate, and conquer or exterminate an older people ; and in that case did the pre-historic inhabitants of the country belong to one or several races ? And in the latter case

3. Did they live here simultaneously, or one after the other ?

4. To what race did the older, to what race the succeeding people belong ? What kind of life did they lead and what grade of civilisation did they occupy ?

For the purpose of answering the foregoing questions Nilsson divides his available material into four principal parts :—

The first includes a comparison of the antiquities of stone, bone, etc., found in Sweden, with the implements still in use among savage nations.

The second a comparison between the skulls found in ancient grave-hills and those of existing races.

The third a comparison between the ancient grave-chambers and the dwelling-houses of the Esquimaux.

The fourth a comparison between the fabulous stories of the ancient sagas as to the existence of trolls, dwarfs, and giants, and the description given by travellers of the ideas of rough primitive peoples with regard to other uncivilised peoples immigrating into their country.

In the first part of his work, then, Professor Nilsson carefully describes all the various forms of stone and bone implements found in Scandi-

navia, and classifies them according to their forms and applicability, just as if he had to arrange a series of natural history objects. He shows from the analogy of similar modern tools from all parts of the world the probable uses of the various ancient implements and weapons; and points out most remarkable resemblances, not to say identities, between Scandinavian forms, even when highly complicated, and those of existing nations at the antipodes. Professor Nilsson does not infer from such resemblances that any connection exists or ever existed between these widely separated peoples. He holds that the nature and form of tools and weapons do not justify any inference as to the ethnic relations of the peoples using them, and that they really only indicate the degree of civilisation. We doubt whether our readers will be prepared to endorse Professor Nilsson's theory that the remarkable resemblances alluded to are to be accounted for by supposing that savages contrive their weapons "instinctively and in consequence of a sort of natural necessity;" but we venture to think that this supposition is at least as philosophical and more in accordance with known facts than the theory that would account for such resemblances by an assumed unity of origin of the human family.

Into the details of the various descriptions of axes, chisels, fish-spears, harpoons, fish-hooks, plummets, hammer-stones, whet-stones, etc., etc., we cannot enter; but must refer those of our readers who are specially interested in these objects to the work itself. Nilsson expresses his dissent from the proposed division of the stone age into a palæolithic and a neolithic period, the first characterised by the rough, unground implements of the drift type, and the latter by ground implements. His reasons for doing so are, that polished, unpolished, and roughly hewn stones are constantly found together. An extension of this reasoning would, however, abolish the grand divisions of stone, bronze, and iron ages themselves, as stone objects are frequently found with bronze, and bronze with iron. It is not reasonable to suppose that the adoption of a newly-introduced material or mode of working implements would cause that previously used to be immediately abandoned. The two would necessarily coexist for a considerable period. In deciding as to the evidence of a palæolithic age, there is of course a special source of error in the fact that every flint implement would be roughly hewn before being ground, and that a mere unfinished article might thus be supposed to belong to a more primitive type. The weapons of so-called palæolithic type, that is to say of the rude forms such as characterise the axes from the drift gravels, are not illustrated in the work under review, and in fact do not occur in the northern museums. The editor in his preface goes so far as to infer from the absence of im-

plements of the most ancient or palæolithic types from the Scandinavian museums, that man did not appear in Scandinavia until the neolithic period. When we remember, however, that the specimens in the museums are chiefly derived from grave-hills and turf-moors, and that the attention of the *Danish* and *Swedish* antiquaries has probably been but little directed to the diluvial deposits where the palæolithic form of implement may most probably be found, we think it quite premature to lay down any such conclusion as that arrived at by Sir John Lubbock. Moreover, Professor Nilsson himself says, in the preface to the English edition, "I will, however, not deny that such articles of flint [*i.e.*, rough-hewn] which by some antiquaries are called *coast-finds*, and which are also to be seen with us in several places in Scania, on the coast of the Baltic, are older than those lying in the tumuli." In the preface to the 2nd (Swedish) edition, of which the English preface is an adaptation, Nilsson adds, "These probably belong to a different people from that which built the gallery-tombs and cromlechs."

Even allowing that no implement of the true drift types have been found in the north, the facts, mentioned by Nilsson in this present edition of his work, as to the objects of flint found along the coast of the Baltic, in peat-bogs underneath the ridge of gravel and stones, called the Jära-wall, would lead one to doubt whether there is not sufficient evidence in Sweden of a palæolithic period as defined by Sir John Lubbock in his able address to the Archæological Institute. Some more precise information as to the occurrence of the bones of the cave-bear under the Jära-wall, and their relation to the implements found in the same peat-bog would, however, be very desirable.

It is to the osseous remains of the peoples themselves that we must look for the only satisfactory evidence as to the race or races to which the prehistoric inhabitants of Scandinavia belonged. We therefore turn with special interest to that chapter of the work before us which contains a description of the cranial form of the modern Swedes, and a comparison between it and the form of the skulls found in ancient tombs and turf-moors. This part of the work has undergone considerable changes in the various editions; and although the subject is not treated, even in the latest edition, in the elaborate and systematic manner to which the works of recent craniologists have accustomed us, much interesting and valuable information is afforded.

When the original *Sketch of a History of Hunting and Fishing in Scandinavia* appeared, not a single skull from a tumulus had been preserved, as far as Nilsson knew. A cranium had, however, been found twelve or fourteen years before, buried three or four ells

deep, with stone implements, in an old turf-moor in Scania. Nilsson had been led to suppose from resemblances in the implements, from the form of the chambered tumuli, the mode of burial, and various other considerations, that the early inhabitants of Scandinavia were Greenlanders; and he thought that such supposition was confirmed by the resemblance which he found to exist between the skull from Scania and those of another hyperborean people, the Lapps. His general conclusion from all the evidence, archæological and cranio-logical, known to him in 1836, therefore, was: "One can, after all this, hardly doubt that the earliest inhabitants of the coast of Sweden were the same people, with the same customs, mode of life and religious usages as the *Greenlanders*, and occupied the same grade of civilisation as they."

Between the date of the publication of the *Sketch* and that of the *Primitive Inhabitants of Scandinavia*, Anders Retzius had, however, published his celebrated paper, "Om Nordboarnes Cranier" (on the crania of the inhabitants of the North), in which he showed that the cranial forms of the Lapps and Greenlanders are entirely different, the former belonging to his class *Brachycephali orthognathi*, and the latter to the *Dolichocephali prognathi*. Accordingly, in that part of the first edition [1838-43] of the *Primitive Inhabitants* which treats of the crania, nothing is said about the Greenlanders; the conclusion arrived at is—"There is therefore every reason to assume that the *Lapp* people is the last remains in our North of the race which built these chambered tumuli, and fashioned and used the objects of stone, bone, etc. found in them."

On what evidence, then, it will be asked, rested this supposed identity of the builders of the chambered tumuli with the Lapp people? Professor Nilsson had made himself familiar with the prevalent form of skull amongst the existing Swedes, and he had opportunities of examining various crania discovered with objects of stone in ancient chambers. He found, on comparing these latter with the former, that they showed essential differences from the Gothic stock which now inhabits Sweden. On the other hand, he found that the ancient crania corresponded remarkably with those of the Lapps. After comparing the well-known skulls from Moen, described by Erchricht, with Lapp skulls, he concludes:—"A more decisive proof of the ethnic relationship of the primitive inhabitants to the Lapps could not, it appears to me, be demanded or hardly even produced." At this time, however, Professor Nilsson, as he himself confesses (p. 185, Swedish edition of 1866), had not seen a single skull from a chambered tumulus in Sweden. The bold hypothesis of the identity of the builders of the Scandinavian gallery-graves with the Lapps was based entirely upon

skulls discovered in Denmark ; and when the first collection of skulls from Swedish gallery-graves was brought together in 1863 by Baron von Düben, from Lock-Gården in West Göthland, the crania were found to have not the slightest resemblance to Lapp skulls. On the contrary, they resembled those of the modern Swedes, except in the size of the superciliary ridges and the proportions of the face. This discovery of Professor Düben's has caused a considerable modification of the views expressed in the second edition of Nilsson's work. In that edition the discovery was only noticed in an appendix, in accordance with the plan for showing the progress of archaic anthropology in Sweden between the years 1843 and 1866.

In the third edition, that portion of the chapter now under notice, which described a certain long-headed form of skull, found associated with bronze weapons, and which Nilsson was formerly led to regard as Celtic, i. e., appertaining to the same race as the Highland Scotch, is omitted, in accordance with the views now adopted by Professor Nilsson of the introduction of bronze into Scandinavia by a Phœnician people.

Altogether, the problems presented by Scandinavian craniology seem to be sufficiently complicated, and the new edition of Professor Nilsson's book can hardly be said to clear the matter up much. We look forward, therefore, with great interest to the paper on this subject, on which we understand that Baron von Düben, the successor of Retzius in the chair of anatomy at Stockholm, is engaged. We trust that the learned professor will give measurements of the long bones obtained by him from the West Göthland tombs, as they will be of very essential service in determining the relations of the ancient dolichocephali of Sweden to those of other countries of Western Europe.

As we have shown that Prof. Nilsson's views as to the race to which the early inhabitants of Scandinavia belonged have undergone considerable modifications, we think it only right to give *in extenso* his latest opinion on this subject. He says, at pp. 114 and 115 of the English edition—

“With the exception of the Laplanders, who belong to the short-headed people (*gentes brachycephalæ*), all the inhabitants of Scandinavia have, from time immemorial until the present day, belonged to the class *dolichocephalæ*. These have, ever since pagan times, chiefly consisted of Swedes (Svear) and Goths (Göter), of which the latter are by far the oldest inhabitants of the country, and their arrival here dates far anterior to the commencement of history, when they were spread over the southern and western districts of the country. The Swedish colonists have immigrated at a much later period, and were at first settled in the country surrounding the Mölar Lake, whence they have gradually spread themselves over the rest of the country.

"In dialect, as well as in idiosyncrasy, the difference between the two is still very noticeable ; but I must confess that, with respect to the shape of the skulls, they do not appear to me to offer any distinct features by which they can be certainly distinguished from one another."

We venture, however, to think that there is some evidence of two distinct head-forms amongst the modern Swedes in the discrepancies which exist between the breadth indices of Swedish skulls as given by various writers. The results obtained by Ecker from skulls derived chiefly from the province of Upland, differ most from those of other observers. The breadth-index as given by him is 71·5 only, whereas the measurements of Davis and Thurnam indicate a breadth-index of 78 ; those of Beddoe 78·3 ; of Retzius and Pruner-Bey 77 ; and of Welcker 75·2. There seems to be little doubt, however, that the ordinary Swedish skull belongs to His and Rüttimeyer's Sion form. This is confirmed by the widest induction we are acquainted with on the subject, viz., that derived by Professor von Düben from fifty normal Swedish skulls. The average breadth-index of these fifty skulls was 76·1 (see page 27 of Von Düben's paper, "*Kranier met tidig förbening af pilsömen*"). Professor His himself mentions, in the *Archiv für Anthropologie*, No. 1, p. 74, that a Swedish skull, presented to the Basle collection by Retzius, belongs to the Sion form. He also states that Baron von Düben acknowledged to him that the Hohberg form occurs in Sweden. May we not, therefore, suppose that the modern Swedish Sion and Hohberg forms are those of the Suevi and Gothi ? It is to be remarked, however, that, as far as we know, sufficient evidence has not yet been obtained to decide which of the two forms is that of the Suevi, and which that of the Gothi. A skull described and figured by Nilsson in the English edition of his book appears to belong to the Hohberg form, and Nilsson says that heads similar in shape to this skull are occasionally met with even in persons now living (p. 117). The skull referred to was found in an undisturbed shell-bed at Stängenäs in the parish of Bro. Everything seemed to indicate that the owner had perished by some accident, and that part of the shell-bed was afterwards formed over him. This bed is now at least one hundred feet above the level of the sea. We cannot here follow further the intricacies of Scandinavian craniology ; but we may just state that there seems to us to be evidence in the ancient tombs and deposits of the North of no less than five cranial forms—two brachycephalous, probably those of the Lapps and the Finns ; and three dolichocephalous, which may be those of the Swedes proper, the Goths, and a Celtic* [or possibly Semitic] people respectively.

* The skulls here alluded to are there found with bronze objects, in the Island of Oeland, and elsewhere.

We have lingered so long over the first two parts of Professor Nilsson's book that we shall be able to do but scant justice to the parts still unnoticed, namely, those on the forms of the chambered tumuli, and on the evidence derivable from the national sagas as to the nature of the ancient inhabitants of Sweden.

The comparison instituted by Nilsson between the grave-hills of the stone period and the winter huts of the existing Esquimaux, has been already alluded to in the notice of the *History of Fishing and Hunting in Scandinavia*. This comparison is still more carefully worked out in the various editions of the more recent work, and the subject is discussed in all its bearings. The narrow side gallery, running south or east, so characteristic of the ancient chambered tombs and dwellings in countries widely separated, is ingeniously accounted for by supposing it to be the homologue of the long passage to the mountain cave, doubtless the earliest dwelling of man. Just as the caves themselves were of varying form, whilst the passages to them were uniformly narrow, so are the chambers of the tumuli of the most different shapes, whilst the gallery or passage to them corresponds more or less in all. The confused manner in which human bones are mixed together in the stone chambers has led some observers to suppose that it was not the custom to place corpses in these depositories, and that in fact they were simply used as bone-houses. Nilsson endeavours to disprove this view on the ground—(1.) that it is not probable that implements and ornaments would be deposited with mere bones; and (2.) that the appearances may be equally well accounted for by supposing that when the chamber began to get filled the skeletons were flattened down and a new floor formed for fresh bodies.

The space left to us will not admit of our giving more than a passing reference to the very interesting and ingenious chapter in which Professor Nilsson attempts to show that the dwarfs and pigmies of the Sagas were but the ancestors of the Laplanders of the present day, and that the Jotnar or giants of the same histories were not imaginary beings, but a tall race of human beings who worshipped the god Thor; that is to say, that they were the ancient Goths, or possibly a Finnish race, looked at from a Lapp or dwarf point of view. It is worth mentioning that there is evidence in the Sagas that the Lapps, even after they were driven from the southern and richest parts of Sweden, were held in greater respect than now, and that their daughters were occasionally married to men of the Gothic race. There are also many passages in the Sagas indicating that intermarriages took place at a very early period between the incoming Asar or Swedes and the Jotnar or Goths.

Altogether the English edition of Professor Nilsson's book forms a very valuable addition to our anthropological literature. We could have wished, however, that the work of editing had been thoroughly performed, instead of being limited to a dozen unimportant notes, a preface of a couple of pages, and an address nearly two years old, printed by way of introduction. It is true that the English edition is an improvement upon the Swedish as regards facility of reference; but much more might have been done in this direction. The editor apologises for the slightly foreign aspect of the English, and rightly remarks that in a scientific work accuracy is of more importance than style. In so far as we have examined the translation it does not seem to follow the original so closely as could be wished; the foreign aspect referred to by Sir John Lubbock seems to be the result of an imperfect acquaintance with the English language rather than of a desire to reproduce the exact language of the author. The lithographs which illustrate the work, though executed in Sweden, are not so carefully drawn as those of the Swedish edition of 1866.

THE INTERNATIONAL CONGRESS OF ARCHAIC ANTHROPOLOGY.

THE *Congrès International d'Anthropologie et d'Archéologie préhistoriques* will be held at Norwich, under the presidency of Sir John Lubbock, Bart., F.R.S., on Thursday, the 20th of August next. That the members of the Congress will be received here with all the honours which such men of European fame richly merit; that English men of science, unmindful of petty considerations or meaner jealousies, will welcome them to our shores with all the open-handed generosity for which, we may say, this country has at least some fame; and that a peculiarly interesting meeting is before us, are simple truisms requiring no discussion, no dilatation in this place. But, having been frequently asked questions respecting this Congress, its members, their aims, objects, etc., we have thought it to be our duty to give a short account of its origin, and what it has already done.

At a meeting of the "Italian Society of Natural Sciences," held at Spezzia in September 1865, M. Gabriel de Mortillet, in an eloquent address to the members, gave them a summary but comprehensive

view of the then actual state of prehistoric knowledge. He insisted upon the very great importance of such studies, and showed how the meeting could give them a decidedly progressive impulse, by at once forming an International Congress, devoted to their special promotion and advancement. At the end of his speech a proposition was made from the chair, that an International Prehistoric Congress should be immediately founded, and the suggestion was received with unanimous shouts of applause, and voted by acclamation.

We may be excused for saying a word or two of M. de Mortillet, *en passant*, in this place, as his peculiar character and history may be unknown to many of our readers. He was one of the most eminent Italian geologists of his day, and was early struck by the now well-known discoveries of M. Boucher de Perthes, in the alluvial at Abbeville, the lacustrine constructions in the Swiss and Italian lakes, the terramares of Italy, the kjökkenmöddings of Denmark, the caves and grottos of France and Belgium, and the flint workshops of Grand-Pressigny. Clearly seeing and duly appreciating the vast limits of the new horizon thus opened to his view, he resolved that for the future he would solely devote himself to the study of prehistoric man. He accordingly went to Paris, where he founded a monthly periodical in September 1864, entitled *Matériaux pour l'Histoire positive et philosophique de l'Homme*.^{*} We are sorry to say that this excellent and cheap periodical is far too little known in England. Its principal object seems to be the giving of full and minute reports of the almost daily discoveries of prehistoric remains, in all parts of the world. It is truly a journal dedicated to the advancement of *Anthropologie et Archéologie préhistoriques*. It occasionally devotes a few pages to Darwinism and spontaneous generation, both of which subjects are considered of much more importance in France than they are on our side of the Channel, and to use an Americanism, it puts its foot down emphatically upon all shams. It would have suddenly put a stop to the career of Flint Jack if he, or any one like him, had appeared in France. And when a Frenchman, who shall be nameless here, *discovered*, in a cave in Poitou, images of Indian idols and letters of the Sanskrit alphabet engraved on bones, *proving* that just 13,901 years before the Christian era, an Eastern tribe had migrated to France; we may well imagine the setting down that the *soi-disant discoverer* got for his pains from M. de Mortillet.

But, to return to the meeting at Spezzia, where the Congress was

^{*} Paris: 35, Rue de Vaugirard. M. de Mortillet is author of many other works, of which the best known are *Le Signe de la Croix avant Christianisme*; and *Origine de la Navigation et de la Pêche*.

founded, the two following resolutions were immediately adopted. First, that the Congress should not be held twice successively in the same country ; and secondly, that the meeting for the following year (1866) be held at Neufchatel, in Switzerland, under the presidency of Professor E. Desor.* The Congress accordingly held their first meeting at Neufchatel, where they had a most cordial and brilliant reception, the *fêtes* connected therewith lasting for three entire days. There were collations, *soirées* and fire-works ; wine of honour was pledged in bumpers, by the lurid glare of Bengal lights, in the artificial but gloomy caverns constructed to supply the town with water. Picnics were held under the gigantic boulders in the adjoining but umbrageous woods by a society of young men. Picturesque excursions were made amidst the surrounding mountains, enlivened and embellished by the presence of beautiful young ladies ; so that the recollections of the hospitalities of the Neufchatel people remained for ever impressed on the breasts of the *savants*.

The sittings were held on the 23rd of August, in the hall of the gymnasium, and among those present were French, Germans, Americans, and Belgians, but only one Englishman. Professor Desor presided, MM. Bertrand and Nicolet were chosen as vice-presidents, and M. G. de Mortillet was elected secretary. The meeting was opened by M. Desor, who, after a long and effective speech, declared that the first session of the Congress had commenced. He was followed by M. Carl Vogt,† Professor of Geology in the University of Geneva, who made a communication on a human skull of the age of stone, found at Greng, in the lake of Morat. Then M. Dupont‡ gave a most interesting account of the human remains found in the caves of Belgium, saying that he had explored no less than twenty-four caverns near Dinant on the banks of a river called the Lesse, which is an affluent of the Meuse. We would like to give a *resumé* of those most interesting and instructive

* Author of many anthropological works ; but best known by *Les Constructions lacustres du Lac de Neufchâtel, comprenant les Ages de la Pierre, du Bronze, et du Fer*. Neufchâtel. It has now reached a fourth, we believe a fifth, edition.

† Professor Vogt is a voluminous writer, but best known in England by his *Vorlesungen über den Menschen, seine Stellung in der Schöpfung und in der Geschichte der Erde* ; this work having been edited for the Anthropological Society, by Dr. James Hunt, their President.

‡ Besides being the author of numerous contributions to scientific journals, the name of M. E. Dupont will ever be indissolubly connected with his discoveries made on the banks of the Lesse. See a report delivered to the Anthropological Society on "The Bone Caves of Belgium," by Charles C. Blake, Esq., in *The Journal of the Anthropological Society*, vol. v, p. 10. Also, a letter from M. Dupont in the same volume of the *Journal*, p. clxxvii.

speeches ; but, like the imp of the old enchanter, our pen is confined within a magic circle by the rigid exigencies of space, and we dare not to cross it. However, as our object is merely to afford to the reader a notion of the scientific qualities of the Congress, a notice of some of the addresses delivered by the members will be quite sufficient for our purpose. I may just add, however, that M. Frederic Troyon* spoke sympathisingly of the lamented death of our late colleague, Mr. Christy, little thinking that before the snows of November whitened the Swiss mountains he too would be an inmate of the narrow and silent tomb.

At the close of the Congress it was decided that the members should hold their second meeting at Paris, in August 1867, under the presidency of M. Edouard Lartet, and the following gentlemen were chosen as a committee of organisation :—

M. Le Vicomte d'Archaic, Member of the Institute ; M. A. Bertrand, Director of the Museum of St. Germain ; Dr. P. Broca, General Secretary of the Anthropological Society of Paris ; M. E. Collomb, Member of the Geological Society ; M. Desnoyers, Member of the Institute ; M. de Longperier, Member of the Institute and Director of the Antiquities in the Museum of the Louvre ; M. de Mortillet, editor of *Matériaux pour l'Histoire de l'Homme* ; M. Penguilly-l'Harridon, Director of the Museum of Artillery at Paris ; M. Pruner-Bey, formerly President of the Anthropological Society of Paris ; M. de Quatrefages, Member of the Institute, Professor of Anthropology at the Museum of Natural History ; M. de Saulcy, Member of the Institute ; M. de Reffy, Officer of Ordnance to the Emperor ; M. le Marquis de Vibraye, Member of the Institute.

The members of the committee of organisation, or in fact, management, were empowered to elect such foreign *savants* as would be most likely to be approved by the Congress. These were to take the title of corresponding members of the committee, and a large number of the leading scientific men of all countries were thus elected. And as the time drew near for the meeting of the Congress, the 17th of August, the following most interesting questions were inserted by the committee, in the programme of their proceedings, as proposed for open discussion :—

1. Under what geological conditions, and amidst which *fauna* or *flora*, have, in the different parts of the globe, the most ancient traces of the existence of man been met with ? And what are the changes which might since that period have taken place in the distributions of lands and seas ?

* Author, among many other works, of *Habitations Lacustres*. A second edition appeared immediately after the gifted author's death.

2. Was habitation in caves universal? Is it merely the fact of one and the same race, and does it relate to one and the same period? If the contrary be the case, how can the cave inhabitants be classed and subdivided, and what are the essential characters of each subdivision?

3. Are all the megalithic monuments the work of one people, who have successively inhabited different countries? If this be the case, in what direction has been the march of this population? What have been their successive progresses in arts and industry? And what are the relations between these people and the dwellers in the lacustrine habitations, of which the industry is analogous?

4. The appearance of bronze among the early nations of the West; is it the progress of a native industry, the result of a violent conquest, or of new commercial relations?

5. What, in the different countries of Europe, are the leading characters of the first period of iron; and is this epoch anterior to historic times?

6. What notions have been acquired concerning the anatomical characters of man in prehistoric times, from the most remote period to the appearance of iron? And can, especially in Western Europe, the succession of races be proved, and can these races be characterised?

The subscription was just ten francs, for which sum each subscriber was to receive a *compte rendu* of the proceedings of the Congress. The number of subscribers amounted to 373; M. Duruy, Minister of Public Instruction, taking no less than ten subscriptions, while a M. Hovelacque took two. Added to which was a generous present of a M. Dolfuss-Ausset, who liberally gave the sum of one thousand francs to the Congress. From an analysis of the subscribers, we learn that there were among them seven ladies, six learned societies, two museums, and one school. Of the 129 corresponding members, chosen by the Committee of Organisation, there were just 47, almost one-third of them, who subscribed. The Congress was eminently an international one. Italy, where it was first founded, furnished 33 subscribers. Switzerland, where the first session was held, supplied 13. The Grand Duchy of Luxembourg afforded the same number. Great Britain gave 18; the United States, 9; Belgium, 7; Prussia, 7; Spain, 5; Sweden, 4; Austria, 4; Denmark, 3; Russia, 3; Hungary, 3; Portugal, 2; Saxony, 2; Wurtemberg, 2; Baden, 2; Bavaria, 2; Egypt, 2; Holland, 1; Wallachia, 1; Turkey, 1; Canary Islands, 1; Brazil, 1; Republic of the Equator, 1.

The second session of the Congress was opened at Paris; the meetings were held in the grand amphitheatre of the School of Medicine; and M. Longperier, in the absence of M. Lartet, the President, who was unfortunately unwell, opened the proceedings with a speech full of spirit and eloquence. An election was then made of office-bearers

of the Congress for the session, and Mr. A. W. Franks, now of the British Museum, but late Director of the Society of Antiquaries ; M. Longperier, Director of the Museum of the Louvre ; M. Nilsson, the celebrated Swedish Anthropologist ; M. De Quatrefages, Professor of Anthropology ; E. G. Squier, the celebrated American Anthropologist ; C. Vogt, Professor of Geology in the University of Geneva ; and J. J. Worsaae of Denmark, well-known in England by the many translations of his works ; all these were elected Vice-Presidents. M. G. de Mortillet was again chosen as Secretary-General.

On the 18th of August the members, in the morning, visited the great Industrial Exposition, where M. Longperier assisted them in their investigations of the ancient stone and bronze implements of France ; Mr. Franks performed the same offices for the ancient remains of Great Britain ; and M. Worsaae for those of Denmark. In the afternoon, in one of the Egyptian Halls, they witnessed the unrolling of a mummy that had been swathed since the foundation of Rome, under the able direction of Dr. Paul Broca.

On the morning of the 19th, the Congress visited the Museum of Natural History. M. Quatrefages did the honours, Dr. Pruner-Bey showed the anthropological galleries, and M. Gaudry exhibited the rich collections of palæontology. The evening was devoted to the first question, proposed by the Committee of Organisation, the most ancient traces of man. The subject was announced by M. Vogt in an eloquent speech, which was received with loud and prolonged applause. He reminded the Congress that in scientific researches the surest guarantee of victorious success was solely to be found in exactitude of observation ; the strictest truth in announcing the facts so discovered ; and the most rigorous logic in drawing the conclusions therefrom. The domain of the anthropologist, he said, is so wide and extended that we require the aid of all classes of men to properly cultivate it. The geologist to tell us the nature of the soils which cover the ancient traces of man, the successions of their strata, and the physical influences under which they were deposited. The zoologist to tell us the nature of the animals which accompanied man in his migrations. The botanist to show us the plants which nourished man in his savage or semisavage state, and those which he successfully cultivated during the progressive phases of his civilisation. The anatomist to reconstruct his skulls, the precious receptacles of man's organs of intelligence. The palæontologist to remount even to the era of the diluvium, and show us the now extinct species of animals which man had then to encounter upon the earth. The mineralogist to teach us the origin and nature of those stones from which he formed his first tools and weapons. The chemist, by his analysis of the metals, to indicate to

us the minerals of which they were composed, as well as the mines which supplied them. All the natural sciences must be our friends and allies, and with their aid, and the exact methods of reasoning, can we only hope to complete our researches.

M. Dupont then led the discussion, and after giving many geological details of the quaternary formation in Belgium, he said that in the environs of Dinant three *fauna* could be clearly recognised, characterising three distinctly different epochs of time. The first or earliest of these *fauna*, which contained traces of the remains of man, is composed of animals that have long been completely extinct, as the mammoth, the woolly rhinoceros, the great cave-bear, etc. The second *fauna* contains the species which have emigrated and those that now dwell in the country. The third *fauna* contains those that have been destroyed by man and those which now inhabit the country; and in this last *fauna* alone are fully developed the epochs of polished stone, of bronze and of iron.

An interesting discussion then took place upon the use of the word emigrated being applied to the lower animals.

M. Pouchet asked if these species, to which the word emigrated were applied, had not really been destroyed by man, as the wolf had been in England; or driven backwards by human influence as the hippopotamus, which was once common in the Delta of the Nile, was now only to be found far in the interior of Africa.

M. de Mortillet maintained that certain species of animals had notoriously emigrated Northwards, impelled thereto by a change of climate, totally irrespective of the influences of man; for they could not exist now in the countries where their remains were plentifully found. And he adduced as an example the rein-deer, whereof the remains were abundantly found in the caves of Belgium and France; whereas the living animal could not now exist even as far north as Stockholm or St. Petersburg. Also, the chamois and the ibex, which formerly, as evidenced by their remains, existed in Perigord, but were now only to be found on the summits of the Alps and Pyrenees.

M. Nilsson showed that the rein-deer which was found in the bogs of Sweden is not the same species of animal as that now inhabiting the north; and urged that the fossil rein-deer might, then, enjoy and thrive in a much warmer temperature than the present rein-deer.

M. Dupont repeated that the animals which have emigrated from Belgium are four in number, namely, the rein-deer, the glutton, the chamois, and the ibex. Of the animals that have disappeared through the direct action of man, there are three, namely, the stag, the beaver, and the bear.

M. Vogt reminded the meeting that the term emigrated could as well

be applied to the *flora* as to the *fauna* of a locality. The remains of the plants of the Alps and the mosses of Greenland are found in the plains of France, where they could not possibly exist at the present day ; but no one has been so foolish as to say that they fled thither before the face of man ; their migration could only have been attributed to atmospheric changes.

M. Quatrefages cited Pallas to show that, even in the last century, the rein-deer, assisted by great forests, found its way almost to the shores of the Caspian. And with respect to the differences between the fossil and the actual rein-deer, it may be no other than a slight divergence in their respective breeds.

M. Vogt corroborated this last assertion by citing the domestic rein-deer, which differed from the wild one ; also the rein-deer of the Samoides, which differed from that of the Laplanders, just the same as the fossil rein-deer of France might differ from the actual rein-deer as found in the north at the present day.

At this moment the discussion was interrupted by an important communication from M. Bourgeois, who had discovered at Saint-Brest flint weapons, proving that man had existed as far back as the epoch geologically described as the upper Pliocene. And that M. Delaunay had found petrified bones of the halitherium, a herbivorous cetacean, now represented by the manatee, in the upper miocene of Provence, evidently bearing marks of having been cut by a sharp instrument. Farther still, M. Bourgeois declared that he had found flint weapons in the calcareous fresh-water deposits of Beauce and the sands of Orleans, fully proving that man was in existence in the middle of the tertiary epoch. As the remains of man, or his works, had not been previously discovered later than the quaternary formation, the news of these researches caused a great deal of lively excitement in the meeting, and the discussion was effectually interrupted.

On the 20th, M. Lartet, to the great joy of the meeting, was well enough to take the chair, and warmly expressed his thanks for the sympathetic inquiries of his numerous friends. This day was principally occupied by a conversation on flint, stone, and bronze weapons ; and apparently in contradiction of a work published by a M. Rougemont.* M. Lartet, M. Issel, M. Longperier, and M. Worsaae spoke of flint tools having been found on Sinai and the Lebanon, in Egypt, at Khorsabad, and in the Sahara. M. Schlagintweit also described the quarries of Oriental jade, which he had visited in the course of his

* *L'Age du Bronze ou les Semites en Occident, Matériaux pour servir à l'Histoire de la haute Antiquité.* Par Frédéric de Rougemont. Paris : 8vo, 1866. A work of great archaic research, but disfigured by crude theories of the Semites.

travels in Asia ; and related the curious circumstance that this stone, when first taken from the quarry, is comparatively soft, not acquiring its extreme hardness till sometime afterwards.

On the 21st, the Congress employed the morning in visiting the Museum of Celtic Antiquities at Saint Germain,* M. Bertrand, the conservator, receiving them with the greatest attention. In the evening the second question respecting cave-habitations came on for discussion.

We cannot, nor do we wish to give a full account of these interesting discussions. It must just suffice that we allude to them. It was agreed by all, that the caverns must be put into three divisions, according to the *fauna* which is found in them. 1. The caverns which contain all the quaternary *fauna*, now utterly extinct, as the mammoth, the rhinoceros, the great bear (*Ursus spelæus*), the hyena (*Hyena spelæa*), the cave tiger (*Felis spelæa*), etc. 2. The caverns in which this *fauna* disappears and the rein-deer takes a large development. 3. Lastly, the caverns which contain only the animals now found in the country, many of which species have been, no doubt, domesticated. Then the purely sepulchral grottos, such as that of Aurignac in the Garonne, explored by M. Lartet, and the Trou du Frontal, on the banks of the Lesse, so well and ably described by M. Dupont, added a sort of conflicting element to the debate. Nor was it at all more likely to be speedily discussed by another vexed question that was introduced ; this was the extent of cannibalism in prehistoric days. After a long, but most instructive discussion, which was renewed on the following day, the generality of the members admitted that cannibalism was practised in prehistoric times, down to the period of polished stone. The original question of cave-habitations seems to have been nearly lost sight of altogether.

On the 23rd, the Congress visited the covered alley of Argenteuil, and in the evening the promised discussion on megalithic monuments took place. The discussion was renewed on the 24th, and lasted the whole day ; and on the 25th, the Congress visited Amiens, where they saw the magnificent Museum of the Society of Antiquaries of Picardy ; and in the evening they returned to Saint-Acheul, under the accomplished guidance of M. de Mercey.

* The museum of Saint-Germain-en-Laye is well worthy of the city of Paris. Besides the peculiar historical and antiquarian feelings which the sight of the old palace must raise in the breast of every educated Englishman, the quantity of prehistoric remains now collected there may be well styled immense. All are minutely classified under the able superintendence of M. Bertrand, assisted by a special committee of *savants* ; and the museum fully proves the great importance which is now attached to the study of Archaic Anthropology in France.

On the morning of the 26th, they visited the Museum of Artillery, where they were shown in detail the rich galleries of this beautiful establishment by Colonel Penguilly L'Haridon, the director. In the evening the fourth question on the epoch of bronze was brought forward, and M. Nilsson* introduced his favourite theory that the bronze was introduced to the nations of Western Europe by the Phœnicians. M. Dessor admitted that Professor Nilsson might be quite right in his theories as regarded the North of Europe; but it was a certain fact, that in the lacustrine habitations of Switzerland the use of bronze was introduced by slow degrees. M. de Mortillet said that the study of the Italian lake habitations led to an exactly similar conclusion. M. Nilsson's opinions were also successfully combated by MM. Quatrefages, Leguay, Vogt, and Franks.

The 27th was passed in a similar manner to the preceding days; and on the morning of the 28th, the Congress met in the museum of the Anthropological Society. There Dr. Paul Broca gave them a long and minute description of the various objects forming the collection, particularly of a large series of skulls of varied types and origins, perfectly classed. And M. Vogt took advantage of the occasion to give a *resumé* of his work on *Microcephaly*, illustrated by the actual skulls themselves. In the evening sitting, the presentation of a book by M. Gaudry† gave occasion for a curious dissertation between that gentleman and M. Longperier, on the legendary animals of antiquity, such as the Erymanthean lion, the hydra of Lerneæ, the Nemean lion, the dragon, Pegasus, etc. And then the fifth question, on the first epoch of iron, was opened by M. de Mortillet. He said that in Italy, the *terramares* afforded as precise data to archæology as the different strata of the earth to geology. The remains of the dwellings showed the primitive industries of the inhabitants regularly stratified, so to speak,—superimposed according to their age, one upon another. To the industry of the epoch of stone, there succeeded a bronze age, which lasted for a very long period, and then appeared

* See *Skandinaviska Nordens Ur-Quvunare, ett Forso i Komparativa Ethnografien och ett Bidrag till Menniskoslagets Ulvecklings-Historia*. Lund: 1843. And *Andra omarbetade och tiltakta upplagan*. Stockholm: 1862. In a similar mode to that of Nilsson, Vallancey wrote volumes to prove that the Phœnicians were the teachers of the Irish; and, in 1676, Sammes published a folio volume, entitled *Britannia Antiqua Illustrata*, in which he distinctly derived the early inhabitants of Britain from the same source. Though it is as decidedly nonsensically improbable as Rougemont's derivation of bronze from the Semites.

† *Animaux fossiles et Géologie de l'Attique*. Paris: 1866. A most magnificent work; but I rather think that the book presented to the Congress was an extract from it, entitled, *Considérations générales sur les Animaux fossiles de Pikermi*.

iron,—but without money, without inscriptions, without the representations of organic beings, engravings, or sculpture. These representations do not show themselves till a much later period, though they still preceded what is now termed the Etruscan epoch. The first appearance of iron is, then, an epoch well determined, and essentially prehistoric; and seeing that it is so in Italy, it must *à fortiori* have been the same in other parts of Europe.

Mr. Franks thought that it was difficult to treat this question without entering into historic times. In England, at least, the iron does not appear to be known more than two hundred years before our era. Mr. Franks gave many details; and his speech was considered by the meeting to be most instructive.

M. Desor recognised in Switzerland two periods of iron, both of them prehistoric. One was the epoch of the Gauls; the other ascended to a remote antiquity, as at Hallstatt. However, he must observe, that he looked upon the question from the point of a lacustrine view. A long and interesting discussion ensued, in the course of which money was frequently mentioned, which caused M. Longperier to terminate the sitting by giving very ingenious reasons as to conclusions to be drawn from the presence or absence of money in archaeological researches.

On the 29th, among other business, it was decided that the next meeting was to be held in London, under the presidency of Sir Roderick Murchison.

The last question, the Anatomical Character of Prehistoric Man, was then discussed, and Dr. Pruner-Bey opened the debate. He considered that in the times prehistoric, there were two distinct races; the one brachycephalic, the other dolichocephalic. These characters, drawn from the relative proportions of the skull, seemed to him to introduce confusion into the descriptions of craniologists; and he much preferred, for the future, to term the brachycephalic the race with the lozenge-shaped face, and the dolichocephalic, the race with the oval-shaped face.

M. Vogt corroborated M. Pruner Bey in all his learned researches. There certainly existed in prehistoric times two distinct races; that by atavism they sometimes recur to their ancient character; and that these types also transform themselves with the times.

M. Quatrefages was happy to see that science marched step by step with facts. He, however, slightly disagreed from M. Vogt and Dr. Pruner-Bey. But he would reserve what he thought about the two primitive races for another time.

On the 30th, the Congress spent the morning in visiting the alluvial quarries of Grenelle, and in the evening there was an interesting dis-

cussion on the Neanderthal skull. M. Schaaffhausen declared that it was not a pathological case caused by disease, but the normal skull of a savage slightly removed from a brute. He regarded it as the most ancient vestige of our European population, and discussed at some length the form of the primitive human skull, admitting the theories of transformation.

M. Vogt said that in effect all naturalists admitted the idea of series. It is well understood that he did not mean a rectilinear series, but one branching out on every side, and multiplying itself by its ramifications. He found the dolichocephalic type of skull very pronounced in those which we possess of the period of the mammoth; and he was inclined to believe that this form was of greater antiquity than the brachycephalic.

M. Rochet regretted that there was not time to discuss the figure of man, as he considered that this study, much more than that of the skull, showed the approaches between man and the monkey.

It then being twenty minutes past eleven, M. Lartet brought the session to a close by delivering the following discourse:—

“Gentlemen,—Our labours are at last terminated, and all the questions inscribed on our programme have been carefully and openly discussed by men who, from their previous studies, are the most competent to do so. If upon certain points definite solutions have not as yet been obtained, you will at least have observed material approaches to concord, even amongst opinions seemingly the most divergent. And this is a result that does not always follow contradictory debates, where the questions are seen from different points of view—where unforeseen objections are liable to rise up and destroy our first impressions, and where we learn the intrinsic value of our solitary studies and uncontrolled deductions. We can, however, verify that this project of periodic international union, so happily conceived at Spezzia, so well inaugurated at Neufchatel, has borne good fruits at Paris; and it has a great future still in store for us. Promise us then, gentlemen, to remain constantly united by the bands of confraternity which have been established among us. And as our studies are necessarily placed in a horizon far above mere political views, we ought ever to consider our Congress perfectly neutral. It is not *adieu* that I am now going to say to you, but rather *au revoir*! Next year in England, the following years in other places, we will join our hands in friendship as cordial as that which I now offer with my whole heart to you all.”

We have now given a rapid sketch of the sayings and doings of the Congress, since the project was started at Spezzia till the close of the Paris meeting, with all the brevity in our power. And we have thought it right that we should notice their pleasures as well as their

toils ; so that we might have an idea how to amuse our guests when they come hither. We have unfortunately no museums, like those of Imperial Paris, to which we can take our visitors. The museum of the College of Surgeons is the only great establishment that we can think of at present. A petty fourth-rate Continental town has its museums and its scientific societies that we shall look for in vain in such a place as Norwich.

Correspondence.

ARGENTINE ANTHROPOLOGY.

To the Editor of the Anthropological Review.

SIR,—In the *Anthropological Review*, vol. iii, page 298, there is a review of Mr. Markham's translation of *The Travels of Pedro de Cieza de Leon*, A.D. 1532-50, under the heading of "Mediæval Travelling in South America." On the second page of that paper the reviewer says : "It is not until we reach Rosario in the Argentine Confederation that we arrive at a locality the character of the skulls of the inhabitants of which has been defined. Mr. T. J. Hutchinson has been the first Englishman to afford us reliable information on this topic."

I was for some minutes puzzled to know how such a statement as this could have been made, till I remembered that, with my paper "On the Chaco and other Indians of South America (read before the Ethnological Society on 22nd March 1864, *Transactions E. S.*, vol. iii, p. 321), I sent to said Society, through its President, Mr. Crawford, four skulls of the Mocovi Indians, picked up by me in the Gran Chaco at the beginning of 1863. But if the writer of the review in question imagined these—the only South American skulls I have ever attempted to define—to be of the inhabitants of Rosario, he is very much mistaken indeed. At Rosario there is scarcely a single Indian resident ; for the inhabitants are English, French, North American, Spanish, German, Italian—in fact, of all nations in the world—with a good proportion of Argentines. The last-named may be classed under three different heads. 1. Descendants of the early Spaniards of both sexes ; 2. Offspring of the Spaniards, and their cross with the Indians ; 3. Sons and daughters of all foreigners born on Argentine territory. Yet none of these have skulls more resembling the four sent home by me than the latter do the crania of the inhabitants of Belgravia or Piccadilly.

I should, therefore, be much obliged by your allowing me to repudiate the credit of this so-called "reliable information."

In this country it is a matter of no small difficulty to obtain skulls of the aborigenes, whose tribes are gradually disappearing. I have sent

one of these crania to the eminent anthropologist, Dr. J. Barnard Davis, who, no doubt, can give you an account as to whether it is brachycephalic or dolichocephalic. That it, no more than any of the others, was not "artificially distorted," I am certain. My friend, the late Governor of Santiago del Estro, Don Manuel Tahondas, has promised to obtain for me a few more to send to the same gentleman. From these your Society will be able to obtain what the writer of the article before me entitles "Cranioscopical Facts;" and I trust that no such error will again appear in the pages of the *Anthropological Review*, as attributing the characteristics of Indian skulls to the respectable and intelligent inhabitants of Rosario; for the credit of such a barbarity is not ambitioned by,

My dear sir, yours very faithfully,

THOMAS J. HUTCHINSON, F.R.G.S., F.A.S.L., etc.

MR. DUNN ON LIFE AND MIND.

To the Editor of the Anthropological Review.

Sir,—As the printed abstract of Mr. Dunn's paper, read before the British Association at Dundee, does not contain any account of the facts from which the author has drawn his conclusions, we are not in a position to estimate their worth. However, Mr. Dunn confidently asserts that "all physiological psychologists are agreed that the great hemispherical ganglia of the brain are the sole and exclusive seat of all intellectual and volitional power—of the understanding and the will;" but what say Mr. Lewis, Mr. Busk, and a host of others, to this assertion. If Mr. Dunn's other facts and generalisations are no more true than the above statement, I fear that we cannot trust very confidently in his "conclusions." Were all physiologists really so agreed it would indeed be an important step in mental science. Mr. Dunn seems to be rather of a speculative turn of mind, and rather disposed to interpret facts in the light of his own theories. For instance, he starts with the assumption that the phenomena of life and mind are antagonistic to and not to be confounded with physical phenomena,—and thinks that all attempts to give vitality by means of the physical forces to inanimate matter, have ever been vain and futile, and must ever be so. I should say that we were hardly in a position at present to decide upon such a question as that. Again he says, "from the first moment that the primordial cell of a human organism comes into being and is launched upon the ocean of time and space the entire individual is present," &c., and further on he declares, that "the mind is dependent for the manifestation of its phenomena" on the brain. Now surely these are curious words and strange assumptions to set out with in the search after a science of mind. For here we have life assumed to be something more than a condition or quality of the physical body, and mind considered as a metaphysical entity, manifesting its phenomena by

means of material organs ; but mind is the conscious phenomena alone—unconscious mind is nonsense. The unconscious element is not mind at all, but body. And then again, a stopper is put to all further inquiry in regard to spontaneous generation, by such interesting experiments as those made by the late Mr. Crosse, so that upon the whole I fear we cannot look upon Mr. Dunn as the star that is to guide our way through the obscure, intricate, and difficult phenomena in the grand field of investigation before us, requiring above all things the clearing of the mind from its besetting “idols”—theological superstitions and metaphysical theories—renouncing, once and for all, all assumption and vague speculation for the pure and dry light of the understanding, unobstructed by prejudice or notions of self-interest. No doubt the quality of life has a special character and chemical value, but life is a purely physical quality for all that, as much so as motion or magnetism. Man is simply a living, digesting, breathing, feeling, thinking substance, and having the power and attribute of muscular action ; and to abstract any one of those qualities or powers and turn them into fanciful entities is equally unphilosophical and foolish, and must be highly prejudicial to the advancement of science.

It would appear to be the general belief of physiologists that we know no more of the mind in its relation to matter than we did 2,000 years ago. Then physiologists ought to be ashamed, and not talk quite so loud ; but if it be so, then I am right, and Bacon was right, in saying that what the greatest minds have failed to discover by all the means in their power can only be discovered by other means and instruments not yet adopted or thought of. Is not this conclusive against idealism ? Three persons look at St. Paul's ; each has a similar impression ; but the St. Paul's, we are told, is the perception itself, hence there must be three different St. Paul's, and yet all agree that there is only one, which existed before they were born, and will exist after they are dead. Yet Hume said that idealism does not admit of a reply—he ought to have said that idealism as per Berkeley was nonsense, but logically reduced to absolute scepticism, admits of no reply.

As to the origin of things, the world, the Indians said, was on the back of an elephant, the elephant on the back of a tortoise, the tortoise resting upon a rainbow, and so on ; as if the cause was not in nature itself, and in the very nature and fundamental law of the physical substance “whose subtilty,” as Bacon says, “is far beyond that of sense or of the understanding.”

HENRY GEORGE ATKINSON.

THE NEW GENTILE REVELATION.*

To the Editor of the Anthropological Review.

SIR,—Most of your readers have doubtless been surprised at not receiving the *Review*, as usual, in July ; and on receiving it, have per-

* This letter was sent for insertion in the January Number, but was postponed for want of space.—ED. REVIEW.

haps been further astonished at finding the July and October numbers under one cover. But, on reading the first article of the double number, the feeling of surprise will at once be dispelled, for it will be seen that that article contains nothing less than a new revelation, and it is, of course, easy to understand that the throes of parturition have been such as to delay the *Review* for two months, and the consequent exhaustion such as to demand a cessation from further labour till January.

We have, it appears, all been going astray, owing to the lamentable absence of men of science, who should, at the same time (p. 260), be logicians and metaphysicians. But this is all changed now, for we have at last got a man of science, who, we may reasonably suppose, combines in his own person every other qualification and is able and willing to point out to us the direction in which we are, or ought to be, progressing. The first announcement, with which he favours us, is, that there really is a God (p. 258). Now, this fact, though not altogether new, is yet so frequently lost sight of in the present day that he may well take it as the basis of his further revelations, and we ought to be much obliged to him for recalling it to our minds. We are next given to understand (p. 261), that though there have been many inspired revelations, both to Jews and Gentiles, yet, none of them can justly be considered as final, and that the Gentile revelations (meaning probably those of Mahomet and Joe Smith), are very much of the same sort, and entitled to pretty nearly the same respect as the Semitic; and that neglect of any future revelation may lead to our becoming, like the Jews, wrecks and "stranded waifs on the sands of time."

With this awful warning before us, let us then endeavour to strip this last "Gentile revelation" of the glowing language of inspiration, in which it is naturally conveyed, and see what it all amounts to. And firstly, we learn (p. 257) that all the planets and their satellites are growing into suns, which, as we are afterwards led to infer (p. 269), will all have satellites of their own; and this might lead us to ask how these ever-increasing solar systems are to be disposed of, and might, to some untaught minds, suggest the idea that comets are suns, which have emigrated for want of room to develop in their own sphere, and are seeking to establish themselves elsewhere. This is pretty well to begin with. But we are next informed, (p. 259) that animals and vegetables are only organs of the earth, "thrown up like the teeth or beard of a human subject," at certain stages of development, and that man represents its nervous system. Our author is well aware, he says, that "(captious) objections" may be readily taken to this, such perhaps, as the difficulty of imagining one's beard digging coals and minerals out of one's great toe, or one's teeth driving a railway tunnel through the bridge of one's nose. And the analogy might perhaps have been more correct, had our author compared men to the queer bed-fellows with which misfortune (especially at seaside lodging-houses) sometimes makes them acquainted. But such comparisons are too odious to be dwelt upon. After the foregoing astounding discoveries we shall hear, with comparative indifference, that we (p. 263), are advancing

to a state of radiance, luminosity, and imponderability, of which, as compared to our present condition, the relation of a butterfly to its grub is but a faint type. It is a comparatively unimportant detail that this radiant flying man is to be covered with hair (p. 267); we might have supposed that this was a step backwards, and that on becoming more bird-like, feathers would be the appropriate garb. But this, with many other minor points, we may well permit to escape unnoticed in the blaze of glory with which our radiant posterity dazzles our eyes.

To those unprogressive old fogies, to whom the idea of broadcloth being superseded by hair or feathers, or of their becoming imponderable and radiant, may chance to be unpleasing, it will be some satisfaction to learn (p. 269), that no such changes can reasonably be anticipated, till our earth has served its apprenticeship to the sun, and set up business for itself, though the appearance of higher types leading up to the grand hairy radiant consummation may be almost immediately expected.

As anthropologists, we have all been taught to receive nothing that cannot be proved; and were it not that want of faith may cause us to become "stranded waifs on the sands of time," we might be tempted to ask for some tangible proof, were it even but as a straw, to show which way the tide is setting, that the earth is really growing into a sun, or that men, animals, and vegetables are its organs, or that the former have the slightest tendency whatever to change into radiant, hairy, and imponderable beings.

After all, this new revelation is, in its leading features, so very like the old, that if it appeared anywhere but in a scientific journal, we might be inclined to look upon it as a parody. The new revelation tells us that our earth shall become a sun, and that its inhabitants shall become radiant and spiritual; and the old ones tell us of a city which shall need no sun, but shall be lighted by the glory of God, and the bodies of whose inhabitants shall be even as His glorious body; but while the new revelation has no word of comfort for the dead past, and little even for the living present, but gazes forward into the dim and unknown future, the old ones have in all ages held out a hope to all men—the dead, the living, and the yet unborn—that they, too, should share, and share for ever, in the coming glory. There is, moreover, one other difference which is, perhaps, of greater importance than at first sight appears; for, while our author seems to expect that the new order of things will be developed gradually and without disturbance from the present, the older revelations speak of such things to come beforehand as an increase of knowledge and of scoffers, of wars and rumours of war, of terrible catastrophes and fearful occurrences in the heavens and the earth, of society unhinged, evil universally triumphant until finally and suddenly overthrown, times of trouble such as never have been and shall never be again, and of new and false revelations which, if possible, should deceive the very elect, and against which latter it behoves the author, who seems to be on the look out for a new revelation (p. 261), to be especially on his guard.

Notwithstanding all that has been said, however, the subject, as our author justly observes, is far from exhausted, and I therefore remain, looking eagerly for a second instalment of this new "Gentile revelation,"

Yours very truly,

A. L. LEWIS.

Anthropological News.

ANTHROPOLOGISTS AND MISSIONARIES.—Some little excitement and no small amount of indignation have been raised amongst the Anthropologists of Manchester by an attack recently made upon them, and especially against the head centre in London, by the Rev. W. Davenport Kelly. The following extracts from a letter published in the *Manchester Examiner* of March 6th, will suffice to show the amount of misrepresentation to which Anthropologists are subject, even in an enlightened city like Manchester.

Sir,—At a recent meeting of the Church Missionary Society, in this city, at which several of your readers were present, a very unjust and uncalled for attack was made by one of the speakers upon the Anthropological Society, the members of which were denounced in wholesale terms as infidels and heretics. Ritualists, Roman Catholics, High Churchmen, Broad Churchmen, and all other such unclean cattle, in fact all who presumed to differ in opinion from the speaker, who, taking advantage of Lent, framed a very comprehensive and severe commination—were also unceremoniously condemned. The speaker in question was not, it is satisfactory to state, a Manchester man, but an Hibernian clergyman from Ashton-under-Lyne, who in a singularly discursive oration, at an avowedly religious meeting, where the most sacred subjects were submitted for discussion, excited peals of laughter from his audience by his ribaldry, and who might not inappropriately have wound up the proceedings with an Irish comic song. A list of the members of the Anthropological Society, several of whom belong to Manchester, and many of whom, like myself, are subscribers to missionary societies, will at once show the unfairness of the remarks alluded to. Perhaps I may be allowed to point out three classes of persons who have done far more than we unhappy Anthropologists can be accused of doing to unsettle men's minds respecting the truth of religion, and directly to promote infidelity:—1. Those who, like the comic clergymen from Ashton, take every opportunity to force Scripture and science into collision, so as to persuade weak minds that the two are entirely at variance, a doctrine which the Anthropological Society has done much to refute, and whose object it is to show that, if fairly and comprehensively examined, the two are not only entirely reconcilable, but confirm each other. 2. Those who, as in the case of the facetious individual alluded to, while professing Christianity, by their uncharitable and unchristian conduct and their indulgence in calumny and misrepresentation, cause their practice diametrically to contradict their profession, and lead people to doubt the sincerity of their belief. 3. Those who, in common with the comic clergyman in question, bring religion into ridicule, and lower it in the eyes of the people by introducing indecorous jokes and coarse buffoonery upon the most solemn occasions. I can assure you that whenever questions bearing on sacred subjects have been brought before the Anthropological Society, they have invariably been treated with becoming respect and reverence. I

am certain that if any speaker were to attempt to introduce on such an occasion the indecent, not to say blasphemous, ribaldry or loose levity which lately found so much favour before the Church Missionary Society, he would be at once checked, if not reprimanded by the chairman. I feel called upon to make these remarks in self-defence, against an attack which was alike uncalled for, unjust, and also cowardly, as made behind our backs. I am, Sir, your obedient servant,

"AN ANTHROPOLOGIST."

"Manchester, March 5th, 1868."

TAIT ON BRITAIN DURING THE STONE AGE.—We have received a report of two lectures by Lawson Tait, Esq., of the Clayton Hospital, Wakefield, on "Britain During the Stone Age," reprinted from the *Wakefield Express* of Nov. 23, 1867. The thanks of Anthropologists are due to Mr. Tait, not solely for the information conveyed by these lectures, but in a large measure, on account of his dispassionate treatment of subjects which are very jealously received by mixed audiences. A few such lectures delivered in our towns, large and small, would doubtless be followed by the same important effect which seems to have rewarded Mr. Tait, a favourable impression upon the minds of men of intelligence, who, though willing to meet the truth in any shape, when proved, decline very properly to 'stand and deliver' cherished dogmas at the first summons from science. Many of Mr. Tait's hearers were no doubt greatly enlightened by an introductory statement which we quote for the sake of its truth and opportuneness. "Anthropology," he said, "was not, as was supposed, the science of those alone who wished to prove man descended from the monkey; but it was the science that dealt with the nature of man and of his surroundings."

Investigation of the subject matter of his lectures has led Mr. Tait to the conclusion that the earliest inhabitants of Britain were of Turanian type, as it is now represented by the Finns and Lapps. "He himself had found remains of this race, under peculiar circumstances, in Sutherland. It was a place of burial, under a spot where there were three cists, in which people of the Celtic race had buried their dead; and a skull he had obtained showed to the eye, even without measurement, that it was quite different to those of the Celts." On examination, he found, in most of the measurements, that it was less than the Aztec skull, which was considered the lowest form of development. In the second lecture, devoted to Celtic lore, that race was recognised as worshippers of the sun and of fire, while the notion of Druidism, as a system, was consigned to oblivion in schoolbooks of history, whereto it will no doubt remain as adhesive as nursery tales to the infant imagination. In connection with Celtic worship and so-called "Druidical circles," we find in a lately published work, an interesting observation on the Hindoo races of Decca to the effect that outside almost every village is a circle of stones, quite "Druidical" in character, sacred to Votal, the demon god of the out-cast Helot races.

Speaking of Celtic modes of sepulchre, the lecturer referred to a "chambered cairn, in which a skeleton was leaned against a wall under a cyclopean arch, with what was manifestly a food vessel near him. The appearance of the skeleton was as if the person had died in the position in which it was found, and it might have been that here was the trace of a custom of some present barbarous races, who build up their infirm with a little food with them. It was not a pleasant thing to think of our ancestors, but the truth must be told." With all deference to a judgment formed upon the exact knowledge of the circumstances, we would venture to question the absolute

necessity of charging our ancestors with a custom pertaining to races which we cannot but consider far inferior to the Celts. Would not the custom of providing food, arms, etc., for the use and pleasure of the deceased be a sufficient explanation of the case mentioned by Mr. Tait? We hope to hear that Mr. Tait's lectures have been published at length.

A CORRESPONDENT has drawn our attention to a leader in the *Daily Telegraph* newspaper, in which the mixed marriages in the Australian Colonies are alluded to, and some ludicrous misapplications of scientific nomenclature are to be found. According to the learned journalist "miscegenation" receives a new interpretation, and does not only signify the monstrous union of a negro with a white woman, but it is also to be applied to the "intermingling of English, Scotch, and Irish stocks." This, is so novel a misuse of a very ugly term, that we cannot but direct the attention of anthropologists to the matter. Is it not another striking evidence of the necessity of a proper and scientific study of the science of man, and the adoption of an intelligible nomenclature in that science? Of course it is not to be anticipated that a journalist who (to use Sydney Smith's definition) "must be prepared, should he fall out of a four pair of stairs window, immediately to jump up and write a leading article on that or any other subject," can keep himself up to the mark in scientific terminology, but a word so notorious as miscegenation should at least have been understood by a publicist.

ANTHROPOLOGY AT THE VATICAN.—The following anecdote of Pius IX is related, which *si non vero è ben trovato*. It may illustrate, however, the natural repugnance felt by a man of superior race to one of an inferior, even when the former claims to be the spiritual father of all mankind:—Recently, there was a grand reception of the priests, at which 9,000 were present, and half that number again were outside, unable to enter for want of room. An anecdote is told of Pius IX on this occasion which is characteristic, and is, we are assured, true. A coloured priest, unacquainted with Italian, knelt before him and endeavoured to express himself in Latin, though unsuccessfully. His Holiness then gave him his benediction, adding, *sotto voce*, "*Figlio mio, come sei brutto!*" "*My son, how ugly thou art!*"

THE ANTHROPOLOGY OF BRAZIL.—Anthropologists will learn with great satisfaction that an important step has been taken towards an increase of our knowledge of the anthropology of Brazil. The navigation of the Amazonas was thrown open to all nations last September, an event in itself of the most gratifying nature; and now the Peruvian Government, in a most liberal spirit, is taking steps towards the exploration of the tributaries of this mighty stream. Three steamers, the Morona, Napo, and Putumayo have been despatched down the Ucuyali, and the Napo and Putumayo have succeeded in navigating the Marañon for a distance of two thousand miles. The Morona was compelled to remain behind in consequence of a fall in the waters of the Palcazu, and remained off the island of Passos. Boat expeditions from the other vessels have proceeded up the Pachitea and Palcazu. Many difficulties were encountered in the navigation of these streams on account of their unsettled state; and the natives on the banks, who are cannibals, made a determined resistance to the progress of the expedition. The natives were, however, beaten off at Chontaisla with a loss of twenty-five killed. The results are of considerable importance to Peru, both in a political and commercial sense; as it is now shown that several departments

of the Republic, with a population of half a million, can be supplied with foreign goods by way of the Amazonas, while the products of Peru can be forwarded by way of Maio to the Atlantic, a distance of 3,500 miles from that port to the eastern slope of the Andes. The scientific interest attaching to these facts is very great indeed, and it is hoped that the sphere of anthropological science will be much widened.

ICELANDIC REMAINS ON THE POTOMAC, NEAR WASHINGTON.—A very important contribution to the archaic anthropology of the American continent, interesting to the historian of the early migrations of races, has just been made by Professor Thomas C. Raffinon, of the Royal Society of Northern Antiquities of Copenhagen, in the immediate vicinity of Washington, D.C., U.S., establishing, beyond all doubt, the early settlement of that district by inhabitants of Iceland, and confirming, in a signal manner, several statements made in the *Skalholt Saga* of A.D., 1117, of Arnas Magneas. An account is there given of the explorations of the Icelanders in the new found land named by them Vinland, and in the country to the south and west called Huitramannaland, or Ireland in Mikla (Great Ireland), which is spoken of as having been long before discovered and visited repeatedly by the Irish. It also narrates the adventures of the Northmen among the Skraelings (i.e., small and puny men), so-called in derision in consequence of their cowardly and skulking habits. Among other things, there is an account of a voyage under the command of Herrardur, along the coast of Huitramannaland, south of Vinland (the present state of New York), where they wintered and repaired their ship, and thence in a northerly direction up a river full of falls, which impeded their progress, and to which they gave the name of Hvidserki or White Sark or Shirt. These falls are especially named, and the chronicle proceeds to relate that the illegitimate daughter of Snorri (who was born in Vinland, and was a son of Karlsefre, by Gudrid, the widow of Thorstein) was there killed by an arrow, and buried in the immediate neighbourhood. This chronicle was discovered in 1863, in the ruins of the college at Skalholt, Iceland, by Mr. Thomas Marsh, and the White Shirt Falls were identified by Sir Thomas Murray with the Great Falls above Washington on the Potomac river, although the last named gentleman put forth his identification as a mere hypothesis at the time. That it was, however, exact, the discovery of the grave of the daughter of Snorri and of some of her remains has proved. Professor Raffinon, accompanied by M. Louis Lequereux, Professor Brand, of Washington, and Dr. Boyce, of Boston, in June 1867, proceeded to these falls, and there found a Runic inscription marking the grave of Suasu, an Icelandic woman, on the north-east side of the large rock commonly called the Arrow Head on the Potomac river, two miles below the Great Falls, and about thirteen miles from Washington City. A spruce pine, with a bole of about seven inches in diameter, and the only one within two hundred yards radius, was growing closely, but it has since been cut down that the inscription might be more easily photographed. The inscription consists of six lines, the letters being three inches high, and about the eighth of an inch deep, square at the top, but worn away at the bottom by the weather, and is cut on a very hard sandstone rock, grey, with a brownish tint, about nineteen feet long, seventeen high, and twenty-seven to nine broad. The human remains were found about six feet from the rock. Transposed into Roman letters, with the signs, and indistinct and restored runes in brackets, the inscription reads thus :—

[Sign X] HIR HVILIR SYASY, [Sign T] FAGRHARDR, [Sign X] AUS [TFIR] THINGR [IK] IA KILDI, SY[ST]R TH[OR]G SAM[FETH]RA [word or sign obliterated], HALF [THRIT] UGR, [Sign X] GLEDA GUD [Sign X] S[ALH]ENAR [Sign X], MLI [unknown sign]. Literally:—Here rests Syasy or Suasu, the fair-haired, a person from the east of Iceland, the widow of Kjoldr and sister of Thorgr, children of the same father, twenty-five years of age. May God make glad her soul, 1051.

The style of the Runes is that known as *Navok*, a variety only found in the Orkneys and in the island of Barliof; it is also by far the most ancient variation. The following verbal analysis of the White Shirt inscription may serve as explanatory to our non-Icelandic readers:—Hir hvilir, "here rests," was the ordinary form of beginning Christian inscriptions throughout Europe in the middle ages, and continues to the present day. In the *Skalholt Saga*, the name Suasu is not given. Fagrhardr is the same as harfagur, fair-haired, harfax, and fairfax. It is curious that this special descriptive epithet should be given to Suasu instead of some one attributive of personal strength, if she were the person named in the *Saga*. Kildi and Thorgr are the dative case of Kjoldr and Thorgr, governed by the preposition *af*, of, understood. The former is mentioned as having encountered single-handed, while up to his waist in water, a number of the natives, and Thorgr received only incidental notice in the *Saga*; he is, however, a well-known personage, and has a lineal descendant in the person of Thorvaldsen, the celebrated sculptor. Samfethra, "same father," alludes to a laxity of morals probably prevalent, unless it is to be referred to a common descent from some more remote ancestor. In the first case, however, it is an important confirmation of the *Saga*, as it identifies Suasu with the illegitimate daughter of Snorri Thorfinnson, well known as the father of Thorgr. Half-thritugr—"twenty-five years of age"—is peculiarly Icelandic, meaning half-thirty, i.e., half of the third ten—a common use of the word half. Gleda Guds al henar—"May God gladden her soul," took the place of the usual *Requiescat in pace*. The date is given in Runic characters, as in many other inscriptions. The signs are of two kinds, namely—the cross and two Icelandic figures not yet understood; probably they had a magical signification. On the same rock, just above the right hand corner of the inscription, there is distinctly, but very rudely engraved, M. Langley, 1755. This is the name of a person whose memory is still preserved, and whose great-nephew is still alive. He is reported to have been an ignorant person, quite incapable of forging such an inscription. The human remains were discovered about two feet below the surface, and consisted of a molar and a canine tooth, a fragment of bone either of the femur or pelvis, which crumbled on exposure, three bronze neck ornaments, and a portion of a large encrinite. But, perhaps the most singular discovery consisted in the finding of two Byzantine coins of the tenth century, and unquestionably genuine. A subsequent examination of the same spot discovered a quantity of soil, evidently bearing traces of the presence of bony fragments, and also a flint arrow point about an inch broad, and one inch and three quarters long.

In October last a coloured gentleman, Professor Allen, delivered two lectures on "The Negro Race," in the Vestry Hall, Bow. Mr. T. H. Bryant in the chair. In the course of his remarks he controverted the views put forth respecting the negro by some members of the Anthropological Society, which he stigmatised as "foolish, not to say blasphemous, theories." The lectures were well attended and much applauded.

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REPORT OF THE TRANSACTIONS OF THE ANTHROPOLOGICAL SOCIETY OF PARIS DURING 1865-1867.*

By Dr. PAUL BROCA, Secrétaire Général, Hon. Fellow of the Anthropological Society of London.

GENTLEMEN,—When, four years ago, I had the honour of delivering before you an analysis of your labours, I deemed it necessary to open it by a succinct historical account of the principal phases anthropology had passed through from its origin to the time at which our society had given it a fresh impulse and a new direction. It was useful to show how the field of our science, first restricted to the purely descriptive study of human races, had rapidly become enlarged; and how, abandoning the pretension of standing isolated, it had contracted alliances with all sciences capable of throwing some light on the past and present state of humanity.

For more than half a century the science of language has lent its aid to ethnography. This excellent medium of investigation, the scope of which extends beyond the narrow limits of history, has revealed to us unexpected filiations and has opened to us an almost unlimited horizon. By allowing it to occupy a prominent place in your labours, you have only followed the example set by your predecessors.

But what belongs to you is this, that you have for the first time realised the association of our science, with geology and palæontology, with historical archæology, with natural history and zootechnics, with medical geography, statistics, public hygiene, and finally with physiology, and even with medicine. In order to fill this gigantic programme, the society has claimed and obtained the support of a great number of *savants* devoted to different studies, but all anxious to

* Read at the General Meeting held June 20, 1867. Translated from the third volume of the *Mémoires de la Société Anthropologique de Paris*.

contribute their part to the progress of the science of man. By the side of the *savants* sat historians, men of letters, artists, and philosophers, who have more than once enlightened us in our discussions. The greater portion of human sciences have thus amongst us their representatives, and our society is like a living encyclopædia, where all questions in their different aspects are treated by competent men.

This favourable position has, nevertheless, given rise to certain strictures. Such as differ from us as regards the object of anthropology, and who would restrict it to the description of human races, might have feared that, amidst so many sciences, it would be carried beyond its domain; that it would lose its unity of action, its independence, and, so to speak, its individuality. But it is sufficient to assist at our meetings to see that from the great variety of our labours there always emerge notions which converge to the same object; and that anthropology, so far from being absorbed by the sciences surrounding it, is, on the contrary, the common field where they all meet, the focus which attracts them and binds them together. It is like these large edifices in course of construction, where labourers of all kinds, from the hodman to the artist, bring together and work all kinds of materials, granite, wood, stone, and marble. The seeming confusion at the beginning of the work is soon followed by order and harmony; nor is it necessary to wait until the building is finished to discover the plan of the architect. It is thus that our collective work is being developed. In our case the whole society constitutes the architect, and we all are representatives of the respective sciences, we are the labourers whose works the society utilises. But the extreme variety of the subjects which enter into our programme has raised reflections which have repeatedly been manifested. The necessity of taking anthropological materials from all sources is questioned by none; but it was asked to what extent ought the sciences grouped around anthropology to be utilised. Our distinguished colleague, M. Charles Robert, who first raised this question, has for a long time studied human types from an artistic standpoint. He has specially fixed his attention upon the characters of Greek and Roman heads; characters which he has determined after antique sculptures, without, however, neglecting numismatics or ceramics. But when on the point of communicating to us the results of his curious observations he hesitated; for he asked himself whether researches of this kind, based upon facts within the domain of art, ought to figure in anthropological transactions. He, therefore, invited the Society to formulate in a general manner the nature of the relations the Society wished to establish between anthropology proper and the notions which the latter science borrows from different branches of human

knowledge. The scruples of our colleague were exaggerated, as the attention with which you listened to his paper on the type of the Roman head must have proved it to him. But the general question which he put has preserved its importance, and deserves your attention the more since it has recently been reproduced, when M. Camus communicated to us the learned researches of M. Fétis on musical systems considered as an ethnographical character.

The history of the arts, no more than that of languages, religions, literature, or political societies, no more than that of biology, zoology, palæontology, and geology, forms part of the programme of anthropology. A *mémoire, ex professo*, on painting or music would here be as little in its proper place as a communication on the structure of bones, or a dissertation on the subjunctive mood. Nevertheless, anatomy furnishes us with the best distinctive characters of human races, and we are constantly obliged to appeal to it when we desire to establish a parallel between the human group and the anthropoid apes. Linguistics are not less indispensable to us when we wish to study the filiation of peoples and races. It is of little importance to us whether such or such a race of sheep have a finer fleece or yield more flesh ; but when the history of these races, of their origin, crossing, stability, affords us more or less clear notions on the general question of race or species, then anthropology eagerly lays hold of these facts, which may assist in the solution of some of its most important problems. Thus we have seen that our learned colleague, M. Sanson, with his vast knowledge on zootechnics, frequently, and with great profit, intervened in our discussions. We could not proceed a single step in the study of prehistoric races, if archæology did not furnish us with the elements of the distinction of epochs ; if it did not indicate the relative dates of sepulchres, whence are derived the bones submitted to our inspection. It is, nevertheless, certain that pure archæology would lead us away from our object. This was well understood by those of our colleagues, who, without ceasing to be active and zealous members of our Society, have, two years ago, founded the " Société Parisienne d'Archéologie et d'Histoire," under the presidency of M. Leguay. In this young society, allied to our own by so many bonds, archæological subjects are treated in all their details, and are discussed separately, whilst with us the archæological demonstration is only, so to speak, the preamble of anthropological facts derived from it ; and it frequently happens that the same researches are produced at the same time in both societies, but viewed from different standpoints. This example shows us better than any other the nature of the relations existing between anthropology and the sciences it has grouped around it. It demands from them particulars rather than didactic developments ; and in this way anthro-

pology can exclude no branch of human knowledge which can furnish any data on the history of man and human society.

From this point of view I shall draw your attention to the works of M. Fétis, of Brussels, on the origin of musical systems and their repartition among different ancient or modern, civilised or barbarous peoples. Music, with this *savant*, who has devoted his long life to a study, which, before him, had scarcely fixed the attention of some curious inquirers, has, under his hands, become a science. Accustomed from our infancy to certain musical impressions, we are apt to believe that our classical gamut is the only form of harmony, that the division of the octave into five tones and two semitones is a natural institution, and that any modulation, the elements of which do not exactly enter into this division, is false, discordant, contrary to eternal order. This is, however, a delusion developed by habit. It is sufficient to listen to, or to analyse the song of the nightingale or of the linnet, to recognise that they cannot be expressed on our pianos, and to become convinced that the purest harmony may exist outside of our musical system. This system we find among all people who have adopted our civilisation. Most of the foreigners who attended the Paris Exhibition, after affording, during the day, the spectacle of the confusion of tongues, formed only one people when they attended the opera in the evening. Amidst the diversity of their idioms, music alone established between them common sensations and a common language. But if the same audience had been all at once transported before one of the Chinese orchestras, of which our colleague, M. Armand, has given us an account, the audience would have thought to hear a Charivari, and would have stopped their ears, to the great annoyance of the natives, who understand as little our musical scale as we understand theirs.

In the same way as linguistics may establish between human groups distinctions or approachments, the signification of which is open to discussion, but of which the reality is demonstrated, so may the study of musical systems and their actual repartition furnish important particulars, if not as regards the filiation of peoples, at all events on the communications which must have existed between them at more or less remote epochs. For this reason alone would the vast researches of M. Fétis be worthy of your approbation. The documents which he has collected on the music of most modern nations have led him to establish a certain number of well defined groups. But this notion, however interesting, did not satisfy him. He well understood that we must search for the explanation of the present state in the past, and he has undertaken a labour comparable to that of linguists, who, resuscitating dead languages, and reconstructing even primitive languages, of which there are no remnants, have thrown much light on

prehistoric times. Not content to unite all documents written on the music of the ancients, he has also put into action the instruments discovered by archæologists. Flutes, lyre handles, found in the monuments of Egypt, or sculptured on Assyrian monuments, have served him as models, and by imitating these instruments with rigorous accuracy, he has drawn from them sounds which have revived musical systems buried for thirty centuries. These remarkable works want, no doubt, the control of criticism, but we may say that they open to science a fertile and entirely new road. We cannot hope that the study of musical systems will ever acquire an historical and ethnological value equal to that of linguistics. Music is a mode of expression less rich and less precise than articulate language, and can only furnish much more restricted data of comparison. It is also certain that it is less bound up with the life of peoples, with their nationality, and the facts cited by all. Fétis himself proves that nations whose languages belong to entirely different stocks, have adopted the same musical system. But the means of investigation which he has given to anthropology are not less precious because they reveal to us both the artistic aptitudes of certain races, and also the communications established between them in prehistoric times.

I thought it right to dwell on these new and interesting researches, of which our Society has enjoyed the first fruit, and which have made their *débat* in our science. Arriving now at subjects if not more classical at least more known, I may proceed more summarily.

General anthropology has, as before, occupied a large space in your *Transactions*. The question of the influence of media, which three years ago gave rise to so extended and complete a discussion, came again before us on the occasion when M. Carrier read his important memoir on acclimatisation in America. None was more competent to treat this subject than the author of the *Histoire du Peuple Américain*. Although his researches chiefly referred to the populations of North America, M. Carrier has also studied the acclimatisation of the Negro race in the Antilles and Brazil. That the races of the old world have become acclimatised in the United States is proved by the rapid increase of the population. But in order to appreciate the significance of this movement, it is necessary to distinguish the intrinsic increase from that due to immigration. This, M. Carrier has done, and we cannot sufficiently praise the sagacity with which he compared all the statistic documents—unfortunately defective—which have been collected in the United States from the commencement of the century. It results from his work that the intrinsic increase of the population has notably slackened within the last twenty years. The researches of our learned colleague have moreover established, contrary

to the generally received opinion, that three-fourths of the immigrants do not belong to the Anglo-Saxon race. The racial importance of this fact is considerable. M. Rameau, struck like many other observers, by the differences existing between the English of Europe and Anglo-Americans, has attributed these modifications to the influence of the media, whilst according to M. Carrier they are chiefly due to intermixture. The interesting discussion which then took place between our colleagues may have left the question undecided as regards the thirteen primitive colonies which at the end of the last century formed the American union. But as regards the twenty-three states which have been formed since that time, some of which date as it were but of yesterday, it is difficult to appeal to the action of the climate, which could only have exercised its influence on two or three generations. M. Carrier remarked that modifications produced by climates cannot be manifested in so short a lapse of time.

In order to complete his work, our colleague has studied the acclimatisation of the Negro, not merely in the United States, but also in Brazil. This portion of his *Mémoire* has procured us interesting communications from M. Martin de Moussy on the state of the Negroes in South America, and from M. Simonot on the question of hybridity raised by the study of Mulattoes. If the coloured population increases much in certain regions, it is not, according to M. Simonot, by its own fecundity, but by continued intermixture of blacks and whites. To the numerous and important facts which M. Perrier has collected in his learned memoir on the crossing of human races, and which permit us to doubt the fecundity of many hybrid races, M. Simonot has added another, which, in his opinion, opposes a more decisive obstacle to the formation of mestizo races, and is the tendency, which at the end of a few generations, gradually reduces the descendants of mestizos to one or the other type of the mother races. These phenomena of atavism it is now difficult to distinguish from the effects of return-crossings, because the mongrels of different blood intermarry in all directions either between themselves or with the mother races. This complication can, however, be easily avoided by experiments on domestic animals; and it is from facts based upon such experiments that M. Simonot has deduced the instability of the character of mongrels. M. Pruner-Bey, however, remarked that the conclusions drawn from the study of certain crossings are not applicable to other crossings, differing from the first, either by the nature of the races or species, or by the condition of the medium in which they are effected.

It is very probable, in fact, that these different circumstances must influence the results of the crossing. We must above all take into account the degree of proximity of the races, and what is clearly shown

by the researches of M. Perrier is that the incompatibility of crossings becomes the more manifest as the mother races differ from each other. If the resemblance of the parents constitutes a favourable condition, it is natural to suppose, other circumstances being equal, and putting aside hereditary pathological influences, that consanguine unions will not become injurious simply by the fact of consanguinity. In this manner M. Perrier has, in his work, logically connected the two opposite but still allied questions, that of hybridity and of consanguinity. These two questions have, from the origin of our Society, given rise to numerous discussions, in which contradictory opinions have been expressed. But I shall only speak here of what has taken place within the last two years. I shall not recur to the old debates, some years ago, between MM. Boudin and de Ranse, adversaries of consanguine marriages, and MM. Bourgeois, Perrier, and Dally, who deny the nocuousness of such unions. No one contested the truth of certain facts cited against consanguinity. It was admitted that in families with constitutional taints or hereditary diatheses, the marriages between cousins led to evil results; but whilst some attributed these results to consanguinity, others looked upon them as the accidents of hereditariness. The latter formulated their opinion by saying that *healthy* consanguinity is exempt from injury. The question being thus put, it was only necessary to search here and there for sporadic cases, which apparently supported either of these opinions. In order to avoid the chances of error resulting from individual accidents, it became necessary to study the effects of consanguinity in certain restricted, circumscribed populations, where the unions between relations are habitual. This our colleague, M. Voisin, has done.

The commune of Ratz, situated in a peninsula north of the mouth of the Loire, contains a population of 3,300 souls, nearly all engaged in working in the salt-marshes. The nature of this branch of industry presents few attractions to strangers. It thus happens very rarely that an inhabitant marries out of his parish, and thus consanguine unions, even to the degree prohibited by the church, are very frequent. Thus it happened that in the year 1865, there were between cousins-german, or their children, fifteen marriages, for which it was necessary to ask ecclesiastical dispensation. It was amongst this consanguine population that M. Voisin made his observations. He was not satisfied with merely stating in a general manner the physical prosperity of the inhabitants; but has written the history of each household, examined the parents and children, computed the number of births and deaths, and prepared complete genealogical tables, containing all particulars relative to forty consanguine marriages. When we examine these tables appended to the treatise of M. Voisin, we must agree

with him that, in a healthy population, consanguinity does not present that noxiousness which has been attributed to it. After sojourning at Ratz for a whole month, and after examining all the families, our colleague states that "the vices of conformation, mental diseases, idiocy, cretinism, deaf-mutism, epilepsy, albinism, blindness by pigimentary retinitis, exist in no individual, whether or not the issue of consanguine parents."

Similar observations have been made by M. Dally in the small island of Brehas (Côtes-du-Nord) and by M. Duchenne (de Boulogne) in the population of Portel. They are less rigorous, no doubt, than those by M. Voisin, because they are not accompanied by genealogical tables; but they are not less important. They are, moreover, confirmed by the zootechnic observations of M. Renard (d'Issoire), and M. Legrain (of Brussels), of which M. Sanson has given us a summary. M. Legrain has been specially occupied in the production of Albinism in rabbits. It results from his experiments, divided into several series and conducted with great sagacity, that consanguinity never produces Albinism in these animals when they are bred under good hygienic conditions; but that Albinism does manifest itself after a few generations, when the rabbits are ill fed and lodged in dark and dirty stables. This example shows well the distinction established between healthy and morbid consanguinity.

The questions of consanguinity and hybridity, and the discussions to which they gave rise, lead me naturally to allude to the numerous communications of M. Sanson, on the characteristics of race and species. It is the study of the phenomena of direct or cross generation which forms the basis of the doctrine sustained by our colleague with so much conviction.

The authors who have tried the definition of species may be divided into two groups; the one, the most numerous, base the specific distinction upon the *ensemble* of morphological and anatomical characters; the other following the example of Ray, Buffon, and Flourens, admit as the criterion of species but one purely physiological character, namely the perfect fecundity of sexual unions. M. Sanson accepts both these zoological methods, which hitherto have divided naturalists; he deems them both good, but he applies them to different cases. He employs the physiological method for the constitution of the group called species, and uses the anatomical method exclusively for the determination of the races of each species. These races are, in his opinion, not varieties resulting from a more or less retarded subdivision of a species formerly uniform and homogeneous. They are primordial, or, if you like, as old as the species itself; they are moreover permanent and immutable, that is to say, that neither the influence of

media, crossing, or selection, can durably lead them away from their primitive type. In other words, as M. Lagneau has observed, M. Sanson attributes to each of the races which compose a species, the properties and characters which the classical naturalists have hitherto attributed to species. M. Sanson has clearly expressed this in saying that his object was "To substitute race for species as the last term of natural classification." The doctrine of our colleague is thus only an accentuated and absolute form of polygenism. But the discussion to which it gave rise turned only on the general principles, and the special question of the permanence of human races was not touched. Whilst M. Gaussin contested the validity of an exclusively physiological character upon which M. Sanson based the determination of species, MM. Lartet and Lagneau, raised doubts as regards the absolute permanence of races, and cited facts tending to demonstrate the formation of new races in domestic, and even in wild species. M. Mortillet, finally appealing to palæontology, denied not merely the permanence of races, but even of species. All these objections failed to shake the convictions of M. Sanson, and even his opponents have admitted the talent he displayed in this difficult argumentation. Questions of this kind belong to that class which will be discussed yet a long while. Still the discussion raised by M. Sanson has not been sterile. It has shown, in the first place, that the classical notion of species, considered as a natural group, primordial and permanent, is far from satisfying the present wants of science; it has shown that races, to which has been attributed so great a variability, tend, on the contrary, mostly to maintain and perpetuate themselves without durable changes; that the innumerable varieties obtained by crossing, selection, or culture have generally only a factitious existence, and that when left alone, they disappear very nearly always, either from want of fecundity, or by the effect of the law of atavism, which soon causes the types effaced for a time to reappear.

I regret that I must pass over a great number of purely descriptive anthropological facts, as it would lead me into details of a special analysis. I pass, therefore, to your labours on craniology, which has ever been a subject of your predilection.

The more the crania presented to you (which will enrich your museum) become numerous, the more requisite is it to have recourse to exact modes of mensuration, in order to establish truly scientific comparisons between the different series. Geometrical drawings, angular measurements, triangulations, require the use of special instruments; but they possess the advantage of revealing shades which will escape the most practised eye, and they moreover furnish numerical data which permit the compilation of averages. The commis-

sioners to whom you have confided the charge of preparing instructions for craniometry have endeavoured to render the instruments more perfect. They have presented you with a new goniometer, light and not expensive, with a new craniograph by which, by geometrical projection, all the details of the cranial surface can be drawn, and with a small, very simple instrument, *le crochet sphénoïdal*, by the aid of which we may, without sawing the cranium, measure the sphenoid angle of Welcker. Our colleague, M. Grenet (of Barbezieux) has, moreover, communicated to us a new process of triangulation of the cranium and the face, an ingenious process of which M. Bertillon has shown us the utility in his communication on cephalic angles. In this work, which united all the facts known on the facial angle of Camper, on the auricular angle, and Welcker's angle, M. Bertillon has also included the observations he made on the different series in our museum, and has shown the great use of the judicious employment of statistic calculations in order to correct errors, or rather the divergencies which result from different modes of mensuration.

It was not the first time that the results of craniometry had been submitted to the control of mathematical methods. M. Gaussin had already applied algebraic formulæ to determine the proportions existing between the three diameters of the cranium, and he expressed these proportions by the aid of graphic constructions based on the system of rectilinear co-ordinates. Taking as a starting point the measurements of the great series of crania, known by the name of *Cranes de la Cité*, he deduced a formula which he afterwards placed by the side of craniometric tables formed after the most different series, by M. Pruner-Bey, MM. His and Rüttimeyer, and myself. Such is the accuracy of these calculations, that whenever the formula, applied to a series of crania of the same type, seemed to indicate divergencies, it was found that these depended on the different procedure employed by the different observers for the measurement of the vertical diameter. The road opened by M. Gaussin may be easily enlarged, for all craniometric elements may be applied to the same researches. It is, moreover, useless to point out the importance of a method which admits of reducing to the same standard observations made by means of different processes, and to correct what the astronomers call individual errors.

Our distinguished colleague, M. de Khanikof, who himself knows how to unite the study of anthropology with that of the exact sciences, has applied with success the formula of M. Gaussin to the cephalometric measurements brought from Persia by M. Duhoussset, who, operating on living men, could only by approximation obtain the length of the vertical angle. In conformity with the general instruc-

tions given by the society, M. Duhousset has taken to replace this angle, the height of the plane of the vertex above the auditory aperture. But the position of this aperture in relation to the base of the cranium varies notably according to race. It was, therefore, to be expected that there would be found a certain difference between the cephalometric observations of M. Duhousset and the craniometric formula of M. Gaussin. The difference was, however, very small. In four series of observations out of six it was under one *millimètre* and a half. Only in the two series of Kurdes and Hindoos there was a difference of three or four m.m., which no doubt depended on the variations in the position of the auditory aperture. On that occasion M. de Khanikof communicated to us the notes he had collected in the museum of St. Petersburg on the height of the aperture of the ear above the plane of the occipital foramen. He has consigned them in an excellent table where figure most of the peoples of Asia.

We cannot speak of craniometric tables without alluding to those with which our former president, M. Pruner-Bey, has enriched our *Mémoires* and *bulletins*. Thanks to him, we can each in our room study the construction of the cranium and the face of most human races. The three large tables which accompany his *mémoire* entitled, *Résultats de Crâniométrie*, contain more than 15,000 measurements of 507 crania obtained from all countries. We find there 117 African crania, 167 Oceanic, 82 American, 58 Asiatic, and 105 ancient or modern European crania. Nowhere else do we find such a mass of documents collected by the same observer. These three tables present to us in a condensed form the results of several years minute study, and when we think of the immense labour involved, we ask how our colleague could have found time for his great linguistic researches, and treat besides with so much competence the highest problems of general and philosophical anthropology? The reason is that he possesses the happy privilege of preserving in mature age all the indefatigable energy and the sacred fire of his youth. Let us add that he is one of those rare *savants* who are fortunate enough to devote themselves entirely to the study, or rather to the culture of anthropology. May his example find many followers.

I cannot think of summarising all the craniological facts communicated to us. It is rare that a season passes without our being presented with new crania. Amongst those derived from foreign countries I must mention the crania of two Chellouks from the banks of the White Nile, presented to us by M. Lagardo; the two crania of red-skins brought by M. Berchon; a cranium of a Bechuana sent by M. Lautré, missionary in South Africa; an Egyptian head and an Arab cranium, which we owe to M. Perier; the admirable deformed

cranium from the Valley of Ghovel (Central America), presented to us by Abbé Brasseur du Bourbourg ; and finally the magnificent Australian head given to us by Professor Ch. Martin. This last object, so remarkable from an osteological point of view, reveals to us a curious and hitherto unknown fact of Australian customs. It is mummified ; all the fleshy parts of the head, desiccated and hardened to the highest degree, are closely attached to the bones ; the mouth half open is filled with bird feathers ; finally, a thread firmly knotted passes through the nasal cartilages. From what is known of the customs of Australian people, it is impossible to suppose that this head belongs to a body embalmed or mummified by a methodical process. Every thing leads us to believe that it is a war trophy, desiccated and preserved by the victor as a remembrance of his victory.

I ought particularly to mention the fine series of crania collected in Syria by M. Girard de Rialle, and at Alexandria by our lamented colleague, M. Schnepf. The crania of Alexandria date from the Greco-Roman period. The population of that large town then presented a confused mixture of almost all the races of the old world : thus the practised eye of M. Pruner-Bey was able to distinguish in the collection of M. Schnepf, apart from the Egyptian crania, a predominant number of Greek, Roman, Ligurian, Negro, and Syrian crania. The crania of the collection of M. Girard de Rialle come partly from Damas and partly from Rasheya. The latter, twelve in number, present a remarkable uniformity, and seem to have been artificially deformed by occipital compression.

The presentations of European crania are too many to be even enumerated. Most of them belong to the pre-historic epoch, or to certain existing populations, apparently the descendants of the autochthones of the stone-age. The conquering people who introduced into Europe the Aryan languages and the use of metals, did not, as was supposed, destroy the vanquished nations ; but by intermixture subjected them to more or less profound modification. Since that period, continued crossings have altered more and more the characters of the primitive races. New conquests, new migrations, have recast, as it were, most of the European populations, and amidst this inextricable mixture, the search for either origin has become one of the most complicated problems of our science. In order to dissipate this uncertainty, two roads are open before us. The one is the study of the populations, who, on the testimony of linguists, have more or less resisted the foreign influence, and who, by preserving their pre-Aryan languages, have no doubt also preserved in a degree of relative purity the type of the autochthonic races. The other is the examination of the remains left in the soil by the populations of the stone period

during the pre-historic epoch, the succession of which is determined by archæology and palæontology.

The surviving witnesses of the primitive human fauna of Europe form, at present, only two groups, confined to two extremities of this part of the world : the Basques and the Fins. Our illustrious colleague, M. de Baer, thought that he found among the remains of the Rhætian Alps a third group of primitive populations ; but this opinion, refuted by MM. His and Rütimeyer in their *Crania Helvetica*, cannot be sustained in the presence of the facts consigned in the two important *mémoires* addressed to us by M. His. The brachycephali of the environs of Coire, far from being the representatives of the autochthon race, are, on the contrary, the descendants of the *Alemanni*, the last invaders of that country. Your attention has thus been directed chiefly to the Fins, including the Esthonians, and to the Basques.

M. Beddoe (of Clifton), well known for his studies of the populations of Scotland and Ireland, has communicated to us a table of the measurements taken on Swedish and Finnish heads. The latter are distinguished by decided brachycephaly, and do not less differ from the Scandinavians by the conformation of the face than by that of the cranium. The absence of Finnish crania in the museums of Paris constitutes a gap which is much to be regretted. M. de Baer has last year presented to the museum of natural history three Esthonian crania, which have given rise to an important communication by M. de Quatrefages. Although separated from the Fins by the Gulf of Finland, the Esthonians speak a dialect of the same language, and, despite the intermixture they have undergone, most of them still preserve the characters of the Finnish race. Of the three crania presented to us by M. de Quatrefages, one is decidedly Mongolic ; the second is also Mongolic, but to a less degree ; both are very brachycephalic. The third is nearly dolichocephalic ; but resembling the second by the structure of the face. Like the latter, it is remarkable by a prognathism limited to the upper jaw. The lower jaws, on the contrary, have a vertical direction ; and M. de Quatrefages has found in these bones the characters of the celebrated jaw of Moulin-Quignon. Our eminent colleague is, therefore, disposed to believe that the Esthonians are the remnants of a race formerly spread to Western Europe, where it has long disappeared either by multiple and predominant crossing, but where its influence is still here and there manifested by the phenomena of atavism. The cases of alveolar prognathism which occasionally appear amongst us, especially in females, would thus be explained. These views are at present founded only on these two crania—for the first Esthonian cranium, being toothless and deprived of the lower jaw, affords no estimate as to prognathism. These views require,

therefore, further confirmation ; but they are, nevertheless, of high interest.

As to the Basque crania, the discussion raised is still pending. Nineteen new crania, resembling in every respect the first sixty, and like them mostly dolichocephalic, have been sent to us by our colleague, M. Velasco. But they are also derived from the cemetery of Zaraus, and consequently are open to the objection taken by M. Pruner-Bey. We ought, therefore, to direct our efforts towards obtaining Basque skulls from another locality. The present of M. Velasco was, nevertheless, attended by this advantage, that it raised a new discussion, which procured us the pleasure of listening to an important lecture by M. Pruner-Bey on the Basque language. Without rejecting the analogies which have been brought forward between that language and the Tatar idioms, our colleague showed that these analogies are superficial and insignificant. In his opinion the Basque language constitutes a unique fact in the old world, and has only real affinities with the languages of America ; but he does not feel justified as yet to infer from the affinity of languages the filiation of peoples. Be this as it may, the notions expressed in this *mémoire* are not favourable to the hypothesis of those who try to reduce to a single race all the autochthonous or rather pre-Aryan populations of Europe.

This question of prehistoric races has, for some time past, owing to the zeal of archaic anthropologists, made considerable progress. France, Switzerland, Belgium, Great Britain, Scandinavia, are not the only countries subject to the investigations of *savants*. Several important prehistoric stations have been discovered in Germany and Austria. The publications of the anthropological section of Moscow inform us of explorations of ancient sepulchres of Great Russia. Numerous explorations recently made in Italy, Spain, and Portugal, teach us that the two western peninsulas also had their stone-age. The results of the first researches of Casiano de Prado have been communicated to you in an interesting report "on Anthropology in Spain," by M. Pruner-Bey. The discoveries of M. de Prado have been confirmed by M. Louis Lartet, the worthy son of our eminent colleague. A note by M. Pereira de Costa made known to us some facts relating to the antiquity of man in Portugal, especially in the basin of the Tagus. This is no doubt only the beginning of a harvest.

The notions we at present possess on the primitive populations of Iberia are still too vague to admit of a synthesis ; but the numerous and precious relics collected in the other peninsula have thrown a new light on the question of Italian origins.

Nicolucci, Italia-Nicastro de Rossi, Cocchi, Canestrini, rival each other in zeal and perseverance, and show what science may expect

from regenerated Italy. The Phœnician cemeteries of Sicily and Sardinia, explored by M. Italia-Nicastro, have furnished numerous and interesting archæological facts. M. Nicolucci has sent us the description and drawings of some crania which have been extracted; and when these crania are compared with such taken from ancient graves in Etruria, the hope rises that the Semitic origin of the Etruscans will at length be definitively demonstrated. We also owe to M. Nicolucci the first craniological notions on the ancient Japyges, a population of Southern Italy, whom the ancient historians but vaguely mention, and who, some years ago, were looked upon as autochthones. Yet M. Mommsen, from some inscriptions on their tombs, believed to detect in the remnants of their language some characters which apparently attached them to the Indo-European group. This view has been fully confirmed by our learned colleague, M. Nicolucci, who, on examining three crania found in the tombs of the Japyges, testified to their resemblance to the Greek type. Combining this also with historical notions, he thought that the Japyges were probably a swarm of the Pelasgic race, driven from Greece into Italy by the invasion of the Hellenes. At present this is merely a hypothesis, but what is nearly certain is that the Japyges were of foreign origin, and that they were not the first occupants of the peninsula. If the Japyges and the Etruscans are but exotic branches, where shall we find the primitive races of Italy? The question as regards Southern Italy and Sicily is as yet very uncertain. The facts brought before us by M. de Rossi with so much clearness establish the existence of a dolichocephalic population, which occupied central Italy during that stone age, which the ill-inspired poets called the Golden Age. But in northern Italy, in ancient Liguria, there is a brachycephalic race which seems to have preceded all others. This Ligurian race, made known to us by the works of M. Nicolucci, extended on the Mediterranean shore to southern Gaul. Our illustrious colleague, the Duc de Lynes, has in that soil made numerous explorations; he has exhumed a large number of crania, shown to us by M. Pruner-Bey, on most of which he found the characters of the Ligurian race.

This would be the moment of stating the facts relative to anthropology in France; but these will be laid before you in a special report, which you have confided to our learned colleague, M. Lagneau. I must, nevertheless, not omit here gratefully to acknowledge the activity and generosity of our archæological colleagues, who, not content with enriching our *bulletins* with their interesting contributions, have presented to us for our museum a large number of objects, the more precious as their authenticity and dates are warranted by competent men. Thus, MM. Bertrand and Leguay have presented to us a whole

series of crania and bones extracted by themselves from the dolmens of Argenteuil, and M. de Saulcy has given us several crania from the tumuli of Meloisey (Côte-d'Or), dating from the first period of the iron age. The Society has also received by the intermediation of several members forming part of the Commission of the Museum of St. Germain, and specially by the exertion of M. Bertrand, director of that Museum, a fine series of crania, exhumed from the Gaulish cemetery of Saint-Etienne-au-Temple, near Châlons-sur-Marne. Several communications from M. Roujou and M. Leguay made us acquainted with the results of the explorations they made at Villeneuve-Saint-Georges, in a station of the polished stone age. M. Roujou adjoined the description of a certain number of worked flints found in the diluvium of the environs of Paris.

M. Mauricet presented to us bones obtained from the dolmen of Moustoir-Carnac (Morbihan), and the fac-simile of two human feet designed on one of the lateral stones of the dolmen of Mont-en-Arzon. If we add to this the splendid cranium of Quiberon, sent by M. de Closmadeuc, of Vannes, and the worked flints which MM. Hamy and Sauvage have brought from Chatillon, near Boulogne-sur-Mer, we shall yet be far from having enumerated all the archæological facts connected with the anthropology of our country. You would not, however, forgive me were I to omit mentioning the numerous communications of M. de Mortillet on prehistoric times. The learned editor of the *Matériaux pour l'Histoire Positive et Philosophique de l'Homme* informs us of every important fact which reaches his periodical, and when we require any particulars we are sure he will furnish them to us.

Most of the archæological documents I have just spoken of belong to the polished stone epoch, which preceded the bronze age—that is to say, the inauguration of the Indo-European era. The centuries which elapsed to the beginning of written history, and which are designated by the name of the Celtic epoch, are accessible by various means of investigation. Anthropology here is not solely founded on archæology; it draws its light from linguistics, and even from the first glimpses of history. A note of M. Henri Martin on Cimmerian migration, a learned *mémoire*, by M. Georges, on the origin of the Celts, added new facts to those brought forward during the great discussion, which took place three years ago, on the origin of the European populations. On the other hand, our venerable foreign associate, M. d'Omalus d'Hallo, whose green old age seems unimpaired by the ravages of time, sustained, in a treatise which you greatly applauded, the objections he had raised against the dominant theory, and it must be acknowledged that if linguistics can demonstrate the Asiatic origin of

Aryan languages, anthropological observation does not permit us to consider all the peoples now speaking these languages as the descendants in a direct line of one and the same people. The diversity of modern Indo-European types can only be explained by the survival of autochthonic populations, who, already diversified at the period of the Asiatic invasions, have intermixed with their conquerors, and have preserved the dissemblance of races there where the affinity of idioms seemed to indicate a common origin.

The multiplicity of races of prehistoric Europe, which was fixed upon our minds as a necessary explanation for the actual state of things, results directly and incontestably from the study of crania of the stone age. In the discussion on the craniological type of men of that period, some apparently contradictory and yet perfectly reconcilable facts have come out. On the one hand you were able to lay down, contrary to the opinion of Retzius, that the great majority of the crania of dolmens are dolichocephalic. This not only holds true for France, but also for Great Britain, and very probably also for Sweden, the native country of the illustrious Retzius; for you recollect that the twenty crania extracted by MM. van Dûben and the son of Retzius from the megalithic sepulchre of Suttra, in Westro-Gothia, were, all but one, dolichocephalic. On the other hand, as already mentioned, the researches of MM. Nicolucci and Pruner-Bey clearly establish the brachycephalic character of the race, which, before the era of metals, occupied Liguria and the shores of Provence. Europe thus at the polished stone period possessed already on its soil two distinct races at least. But these times which preceded our histories, and which seem so remote from us, appear, on the contrary, very recent when they are compared with the incalculable periods which palæontology has revealed to us, and which, finishing with the reindeer epoch, ascend to that of the elephant, the rhinoceros, the cave-bear, and probably higher up, without our being able to point out the limit to which ulterior researches may assign the origin of humanity.

During the past few years of its existence, the Anthropological Society more than once discussed the question of the antiquity of man. A discussion on this subject would now be idle. The existence of the fossil man, of the quaternary man, contemporary with the large pachydermata, is a fact definitively acquired for science. If here and there objections are still raised against the evidence, it is not amongst us that they are raised. I have made a small collection of works, published in France during the nineteenth century, against the heresy of the rotation of the earth. Can we expect that the discovery of M. Boucher de Perthes should find more favour in a certain circle than the discovery of Copernicus? Let, then, as the Gospel says, the dead

bury their dead, and let us pursue our work without noticing the attacks directed against us by men of the past.

We also love the past, but we like to study it, and it is not our fault if it extends beyond the classical register. Our curiosity does not rest satisfied with the knowledge that there were men upon the earth in palæontological times; we want to know what was the social condition of these men, what their physical characters, whether they constituted already then distinct races, whether they differed from those which at a later time learned to polish the stone, and, finally, whether the immense period which elapsed between the mammoth and the reindeer epochs, between that of the reindeer and that of the dolmens, had not witnessed, like the much shorter periods which succeeded them, migrations and conquests renew and remodel several times the human fauna of quaternary Europe.

These highly interesting questions are far from being solved. Nevertheless, several important data have already been acquired, and inspire us with hopes for satisfactory answers at some not very distant time.

With regard to industry, chiefly represented by flint implements, M. Mortillet has shown us that they were gradually perfected. In the lower beds of the diluvium of Abbeville, the hatches are lance-shaped, and struck off in large flakes. In the argillaceous sand which covers the diluvium, and which is consequently more recent, and where no mammoth bones are found, the hatches are elliptic, elongated, and struck off in small flakes. Finally, in the superficial light soil of the slopes, the hatches are polished, wedge-shaped, resembling those found in the dolmens. Were these successive modifications due to the gradual perfection of the same industry or to the arrival of new populations? The admirable discoveries of M. Lartet, which he made in the caverns of Perigord in company with our lamented colleague, M. Christy, render the last supposition as extremely probable.

The inhabitants of the caverns of Perigord had only worked flints, but they had already reached a surprising degree of civilisation and artistic development. We can scarcely conceive how men deprived of the use of metals could have manufactured such an infinite variety of implements of bone, ivory, and reindeer horns. How they could sculpture, I should almost say carve, such elegant forms, and grave upon the handles of their implements the figures of various animals. These figures are distinguished by an accuracy and artistic skill truly remarkable; and in order to meet with a similar degree of art sentiment, we must descend through innumerable centuries to the flourishing period of the Greeks. They form such an absolute contrast by the side of the crude sketches traced upon some Celtic monuments, that we may well ask whether they had not been designed within

historical times by some proscribed who had taken refuge in the caverns of our ancient troglodytes. But who but the quaternary man could in Europe have designed upon the bones of the reindeer the figure of a species of elephant, which differs from all living species? This race, so interesting from its civilisation, led a peaceable life. A cranium, found in the grotto of Bruniquel, of which M. Brun has sent us a photograph, is distinguished by the purity of its form, the gentleness of its contours, the slight prominence of its apophyses, the little depth of its muscular marks, all characters which are incompatible with violent manners of a savage or barbarous race.

What has become of this indigenous civilisation, so original, so different from all known to us? Has it become gradually so modified and transformed as to become perfectly unrecognisable? No! it perished all at once without leaving any trace, and all leads us to believe that it perished by force. After that, without transition, we find only the traces of a powerful race, religious and warlike, furnished with more perfect weapons, and well acquainted with the mode of polishing flints, but otherwise of little industry and without any art notions. We have here all indications of a brutal and conquering invasion. The troglodytes of the stone period, who conquered the soil and knew how to destroy the last remnants of the large mammals of the quaternary fauna, found themselves unable to oppose the irruption of barbarians, and a middle prehistoric age succeeded the happy days of a premature civilisation, the origin of which is at present entirely unknown to us.

These men of the reindeer period, so advanced in certain respects, were probably the polished descendants of the rude savages of the diluvial epoch. The flint industry from the first to the second epoch became a little modified, but not transformed; and although a more regular cutting and small flakes had supplanted the rudimentary initial form, it was still effected by simple percussion, and it was without friction that the flints were worked. These changes, moreover, only apply to the hatchets, the knives always presented a remarkable uniformity. It is finally probable that the art of designing was already known to the contemporaries of the cave bear. This is shown by the curious figure which that indefatigable explorer of the caverns of the Pyrenees, M. Garrigou, has discovered upon a flint in an ossiferous grotto. This figure represents a bear, which, by the length of its cervical spinous apophyses, resembles more the cave bear than any other species of the same genus. If the interpretation of M. Garrigou be confirmed, it might be interesting to find that the art of designing originated in a race, no doubt perfectible, but which, at the epoch in question, was in a half savage condition, and perhaps

given to anthropophagy. M. Garrigou, and M. Roujou after him, have shown several human bones upon which existed methodical percussions made for opening the medullary canal, so as to extract the marrow.

We have now arrived at the most ancient known epoch of the life of humanity. What were then the physical characters of man? The bones of the limbs which have been found prove that the stature was not high; and although the crania, or fragments of them, are still rare, we may assume as nearly demonstrated that our predecessors of the quaternary period had small heads, a receding forehead, and oblique jaws. But here presents itself a more serious and thorny question. In the excavations made by our young and already celebrated colleague, M. Dupont, in Belgium, on the banks of the Meuse, between Liège and Namur, he found sometime back among rhinoceros and mammoth bones in the inferior bed of the cavern *la Naulette*, a curious jaw, the zoological characters of which seemed at first doubtful. By its general form, this bone seemed a human bone, and was so in fact; but by the details of its conformation, by its excessive thickness, by the total absence of the mental prominence, and, finally, by the characters of dentition—characters of the first order, it departed from the human type and approached that of the anthropomorphic apes. Analogous, but not so decided, features had already been found in the jaw extracted by the Marquis de Vibraye from the cavern of Arcis-sur-Aube, the authenticity of which is no longer questioned. In order to find in the living races some of these characters considerably attenuated, we must descend to the most inferior types of Australia and New Caledonia. These do not form, as was hitherto believed, the last, or, if you prefer it, the first term of the human series. The quaternary man places himself below them, and diminishes the interval which separates man from his zoological neighbours. But what is the signification and the import of this fact? Must we see in it a proof of the transformation of species, or merely a proof of serial distribution of organic forms, of which the Darwinian theory gives an hypothetical explanation?

This doubt, gentlemen, still persists after the discussions which so serious a subject could not fail to provoke. If it were demonstrated that the type of the Naulette man, by successive and secular modifications, had become gradually perfected until it reached our own, it would certainly prove a powerful argument for the Darwinists. But do we know in what manner the quaternary races have given place to those of succeeding ages? Who can prove to us that the succession of types has not been the consequence of a substitution of races? Do we not this day see, in several regions of America and Oceania, the

European races supplant the indigenous races? Let us then confess that we as yet possess too small a number of facts to solve the immense problem of human origins; and let us wait until new discoveries furnish us with more numerous data. Whatever may turn out to be truth, it cannot humiliate us. Whether man has received his royalty as a hereditary appanage, or whether he has bravely acquired it by a long series of evolutions and struggles, is he less the lord of the earth? He who uses the blind forces of nature as his instruments, who makes electricity his messenger, who weighs the planets, and even analyses the substance of the sun, need he blush at any revelation in origins buried in the immeasurable depths of the past? No, gentlemen; and your discussion, so complete, so conscientious, so learned on the doctrine of the human kingdom, and sustained with such *éclat* by MM. Pruner-Bey and de Quatrefages, has proved that man, in order to maintain his rank in nature, does not require to calumniate or to debase the beings by which he is surrounded. All the orators who have spoken on the subject have proclaimed the intelligence of animals, and have found in them the germ of intellectual faculties, sentiments, and passions, which have taken their development and their expansion in human societies. Whilst MM. Alix, Rochet, Voisin, laid stress from various points of view, on the great superiority of man, which no one contests, MM. Sanson, Letourneau, Simonot, Roujou, Gaussin, and others have, with not less conviction, pleaded the cause of animals. The contest, it is true, turned only upon a single character, upon which exclusively rests the conception of a human kingdom, namely, the sentiment of religiousness. The question was whether religiousness necessarily existed among all people, whether it was sufficiently universal to serve as a characteristic of humanity. MM. de Quatrefages, Pruner-Bey, and Martin de Moussy had no doubt of it; whilst MM. Prat, Letourneau, Dally, Coudereau, and Lagneau sustained the contrary. We must not feel surprised at these differences, which are inseparable from a subject which touches the most arduous questions of psychology. But we are happy to state that this great discussion on a subject which is so calculated to impassion the minds, and in which the most opposite opinions obtain, has created no discord amongst us. Every one has known how to respect the convictions of his neighbour, and the urbanity of language, a consequence of mutual esteem, has always kept the contest within the serene atmosphere of science.

I am far from having finished, and yet I must stop. I have no time to analyse the works which have filled up your meetings. I was obliged to pass over many important facts, many interesting discussions. But you must blame yourselves if I cannot fulfil my task.

The more you increase the field of your researches, the more you multiply your productions, the more impossible does it become to condense them in a summary of a few pages. Owing to your persevering efforts, the Society is still in the ascendant. The impulse it has given to anthropological study is increasing from day to day; the movement of our Society is propagated in all parts of the world. It is sufficient to look back at your starting point to see with a legitimate satisfaction the progress you have made within less than eight years. What you have accomplished within so short a time is a sure guarantee for your future works.

WHAT IS A TEUTON ?

QUESTIONS of race are, in more senses than one, political questions. It is for this reason that they seldom meet with a calm and unprejudiced discussion; it is for this reason that they continually incur the greatest of all scientific perils.

Two great peoples, speaking a language called Teutonic, made war not long ago upon a third very little people, who also speak a language called Teutonic: and the quarrel was greatly embittered because the governors of the third people wished to make a small section of the governed speak a kind of Teutonic different from the Teutonic spoken by the other two peoples. Some of "The German race" were oppressed because their children were being taught Danish instead of a dialect of German. There was an "oppressed nationality," the meaning of which, when analysed, is almost invariably found to be a language in danger.

There was a time when every one sympathised with the Italian-speaking people of Lombardy and Venetia, because they were ruled by German-speaking governors. If they spoke Italian, said every one, they ought to have an Italian government—a government of their own "race." None paused to inquire whether the new government would probably be better than the old; whether the Lombards were more nearly akin to the Sardinians or to the Austrians; whether race could be established by language. It was assumed, as a self-evident proposition, that race and language must be co-extensive; races were divided into Latin and non-Latin according to language alone; and a great emperor and a great people went to war for an idea.

The same appeal to language has long embittered the Poles against the Russians, and draws perennial sympathy from philanthropists

who have never taken the trouble to inquire in what Polish differs from Russian, or what constitutes a real difference of race.

But, more wonderful still, men speaking Italian clamoured persistently for the union under one government of all who shared their tongue, until at last they persuaded the men who speak German to attempt a double suicide. Prussia took arms against Austria in order that the speakers of German might be expelled from Italy; Austria took arms against Prussia in order that the speakers of German might not be too united or too strong in the North. And mighty battles were fought, and the rivers of Bohemia were choked with corpses, and widows wept, and children were left fatherless, because a few statesmen in Germany and a few other statesmen in Italy preached faith in language as the only proof of kinship.

Word-worship in every form is injurious: it has taught many a man a kind of unconscious hypocrisy in morals; it has wasted many a metaphysician's whole existence; but it has produced nothing so terrible as this wholesale slaughter for an idea—and an idea that is often utterly false.

This belief in language as the great bond of brotherhood has been taught by almost every philologist except Mr. Max Müller.* Its diffusion is best proved by the horrors which have attended it. Its falsity may be shown by one very simple instance. Suppose the insurrection of negroes in Jamaica to have been successful, and all the whites in the island to have been put to death, there would have remained a race speaking English, yet with hardly a trace of English blood; and the philologist of a future generation would, from his own science alone, have had not the slightest clue to the origin of this English-speaking people. Nay, a philological diplomatist might, at some time, have besought Englishmen to fight on behalf of black brethren whose kinship would have been apparent in their tongues if not in their faces.

But although our foremost philologist has given up the classification of races according to language, there still remains a proposition asserted by him, and by almost all the leading writers on language, which, if true, would by itself be enough to prove that grammar is the most infallible test of race. This proposition is that no mixed grammar ever has existed, or ever can exist. Languages have been divided

* There is not one of Mr. Max Müller's clear and brilliant sentences that is better worth remembering than this:—"The science of language and the science of ethnology have both suffered most seriously from being mixed up together." It is strange that the disciples of this master seem willing to accept every doctrine of his but this most important of all. Mr. Cox did no small service to anthropology when, in No. 34 of the *Fortnightly Review*, he called attention to the fact, that the leading philologist has finally abandoned the ethnological field.

into classes according to their grammars ; and between each of these classes and every other, we are told, there is a great gulf fixed, across which no fragment of grammar can pass. A vocabulary may be as mongrel as you please, but grammar is always of the purest strain.

If this theory were true, it would embody the most astounding of all mental phenomena. It would prove an admitted law of association to be false. We could no longer assert that the human mind has the power of applying like contrivances to like cases, but only that it has such a power in all matters with which it can deal, except grammar. In other words, we should have to admit either that the one great thing which Psychology is supposed to have done has never been done at all, or that grammar is something stronger than one of the laws of the mind. We should have to admit not only that, when any language has its volume doubled by the addition of words from another language, it must give up all its grammar or none, but that the men who speak the combined language can never select and combine the grammatical devices of the two component parts. We should have to admit that grammar reduces men to a state of the most humiliating subjection, so that they are utterly incapable of doing any thing for themselves.

Now if all these propositions were established, there would be an unanswerable argument for the classification of races according to language. An appeal to differences of mental characteristics would be quashed at once by the proof that grammar can mould the mind to its own sweet will ; and no one would dare to speak of physical characteristics in the face of a Grammatical Destiny. The grammar which could make the mind could make the man, or, if it pleased, the race.

He, therefore, who asks what is a Teuton ? asks a question which cannot be answered without reference to the great philological dogma. On the answer to this question depend the answers to questions of still greater magnitude. What are the principles of Anthropological classification ? and are there any real differences between the sections of mankind known by different names ?

One of the great families of language is now commonly called the "Aryan." And this family is subdivided into several classes, of which one is commonly called the "Teutonic." The Teutonic class is made to include the various dialects spoken in Scandinavia, Germany, Holland, and England. This class, with the others, we are told, belongs to the great Aryan family, because the science of comparative grammar has traced the grammatical forms of all to a common starting-point. But, in the lapse of time, the grammatical forms of each particular class have undergone development, or changes, of such various kinds that the forms which are characteristic of one class cannot co-

exist in any language with the forms which are characteristic of another class. In short, to use the technical terms of the naturalist, although the origin of species by development and selection is admitted, the existence of hybrids is denied.

In order to test this theory, it is necessary to know what is meant by the "Teutonic class;" it is necessary to have not only a catalogue but a definition, to ascertain what marks out the Teutonic class as distinct from other classes. Now it is obvious that whatever property may be common to all Teutonic languages must be common to any two. If, therefore, it should happen that the comparison of two, or any less number than that which makes up the whole class, will suffice for the purposes of the present investigation, no harm will be done by passing over all the rest. Let us then try to discover what is common to English and High German that is not shared by any members of the non-Teutonic classes of the Aryan family.

Bopp devotes nearly a third of his work on comparative grammar to "the Formation of Words." It may therefore be well to inquire whether the formation of words in English is similar to their formation in High German, as it certainly must be if the "formation of words" belong to the province of grammar, and if no grammar can be hybrid. How then do we form our substantives? There is a word in common use on the Stock Exchange, which would perhaps horrify some comparative grammarians, but which is not the less a portion of our language, and that word is "*backwardation*." A form characteristic of the Italic class of languages is added to a word of German origin in order to make an English substantive. If there be any grammar at work here, it is not only not exclusively Teutonic, but is not even common to all languages of the Teutonic class.*

And this is no isolated instance. *Bandage*, *settlement*,† *hindrance*, and a host of other words tell the same tale. And, on the other hand, words from an Italic source take in turn a German suffix, as in *Christendom*. The same thing happens with adjectives, so that we have the two forms *wondrous* and *wonderful*; we have *knowable*, *thinkable*, *useful*, *useless*; in short we can form our adjectives according to a German or an Italic model, just as we please, no matter whether the word which we convert came to us from an Italic or a German source. In the formation of verbs we are so independent of German

* A word imported whole, as for instance, *Illusion*, goes for nothing in the investigation of grammatical forms.

† Bopp notices a solitary instance, in old High German, of this form *ment* in the word *Hliumund*. But the fact that this is a solitary instance, even if the word be not susceptible of wholly different explanation, is certainly not an argument *against* hybrid grammar.

forms that we can even say *Germanise* or *Teutonise* with any Frenchman or any Greek.

It follows from all this, either that grammar may be hybrid so long as it remains Aryan, or that the "formation of words" is not within the province of grammar. It may be well to assume that modern philologists place themselves upon the second horn of the dilemma, give up Bopp's classification, and so define grammar as to exclude the formation of words.

It then becomes necessary to pursue the investigation further, in order to ascertain what is peculiarly Teutonic in the Teutonic class of languages. The formation of the genitive singular in *s* perhaps? This has been often enough asserted, and the answer can be best given in the words of Bopp: "In no case do the different members of the Sanscrit family of languages agree so fully as in the genitive singular." And Bopp is here using the word *Sanscrit* in the sense in which the word *Aryan* is now more appropriately used, in accordance with a very convenient hypothesis. To go no further, every one knows that both Latin and Greek have a genitive in *s*. This, then, is not exclusively Teutonic. The only inflexions of English substantives are to be found in the genitive singular, and the plural, and therefore it is perhaps in the plural that the essentially Teutonic mark is to be found. But the ordinary English plural is in *s*, in which it agrees with the Italic and Greek classes, and differs altogether from High German.

The long sought Teutonic mark is then perhaps to be found in the comparison of adjectives. Here, at least, English and High German agree; but it unfortunately happens that the Teutonic class cannot make out an exclusive claim to the comparative *er* or the superlative *est*. If an Englishman says *grand*, *grandier*, a Roman said *grandis*, *grandior*; if the English farm-labourer describes his sweat as the "*muckest*" that ever he knew, the Greek would equally describe it as *μέγιστος*.* There is then nothing in the inflexions either of adjectives or of substantives which can be fixed upon as the peculiar property of a Teutonic language.

It is strange, but there is nothing left us now except pronouns and verbs. And the remaining inflexions of English pronouns do not, as a whole, resemble those of the High German more than those of the Latin language. If we look solely at inflexions, *who* and *whom* are nearer to *qui* and *quem* than to *wer* and *wen*; *he* and *him* remind us

* I do not, of course, doubt for a moment that our forms of the comparative and superlative, as well as other grammatical forms, can be traced historically to a Teutonic source; but that fact, as will shortly appear, in no way impairs my argument.

more of *ille* and *illum* than of *er* and *ihn*; *me* and *thee* are more like the Latin *me* and *te* than the German *nich* and *dich*.

And as it is a recognised fact that the person-endings of verbs are simply the remains of personal pronouns, it is no matter of surprise that the person-endings of English verbs display nothing exclusively Teutonic. It has been said that the English language, as spoken by any ploughboy, would tell its own history and provide the materials for its own classification. Now an English ploughboy sometimes, but not always, uses *s* as a sign of the third person singular of the indicative present. He is just as likely as not to omit the *s*, and say *he do*, instead of *he does*; he is just as likely as not to put the *s* on to the first person, and say *I does*, instead of *I do*. And *I does*, to say the least of it, looks grammatically much more like *je fais* than like *ich thue*, while *er thut* looks grammatically very much more like *il fait* than like *he do*. But, even when the ploughboy is what we at present consider to be grammatically correct, he does not form the third person as a German forms it. The German uses *t* where the Englishman uses *s*, and if it be answered that *s* is only the representative of the old *eth*, still *eth* itself is not more like the German *t* than it is like the Latin *t*.

In English we have no other person-ending left, except that of the second person singular. This, when written, agrees with the High German form, but it is never heard in common speech, except from the mouths of Quakers, and some inhabitants of remote country districts, who commonly use the form *thee has*. But even if we allow that *thou hast* is still a mode of expression in the English language, it is as like *tu habes* as *he has* is like *er hat*. The forms are all so like that they afford no ground for classifying one language apart from another.

It is not, then, in person-endings of verbs that the characteristic mark of a Teutonic language is to be found. We must therefore look for it in the tenses or the moods. To begin with the past tenses, what is there in High German that corresponds with *I was doing*? Nothing. But there is something which corresponds with *I did*; and as in the form of that tense there is the greatest probability of finding a strictly Teutonic mark, the consideration of it will be, for the moment, deferred. The High German future corresponds with the English only in the use of an auxiliary verb; but the English auxiliary is totally different from the German. The translation of *I shall* or *will do* is *ich werde thun*, not *ich soll* or *will thun*, which would have altogether different meanings. And it is allowed that the French future is formed by the auxiliary verb *avoir*, that *je ferai* is simply *je faire ai*, I have to do. Now *ich soll thun* would in German mean *I have*

to do or *I ought to do*, but the expression is never used as a synonym for the future. Our *shall* therefore is really, when analysed, more like the French future than it is like the German. In the placid German *ich werde thun*, *I am becoming to do*, or *I go to do*, there is none of the force which appears in the French *I have to do*, or in the English *I shall*, and still stronger, *I will do*. There seems almost to be doubt implied in *ich werde thun*, while perhaps there is excess of confidence in *je ferai*, and *I shall* or *will do*. In the same way *I shall have done* cannot be considered grammatically more like *ich werde gethan haben* than it is like *j'aurai fait*. Any reason which could be given for assigning the English futures to the Teutonic class, and excluding them from the Italic would, *à fortiori*, suffice to exclude the French futures from the class which embraces the Latin, to which they have no points of resemblance.

So in the mood-marks, *may*, *might*, *would*, *should*, we have nothing in common with High German, in which language the words *möge*, *mochte*, *wollte*, *sollte* are indeed to be found, but are never used as mere auxiliaries. Here, as in the futures, the only points of agreement between the German and English are in the vocabularies, not in the grammatical forms; and the vocabulary of the English language, it is now admitted, is not Teutonic, even to the extent of one third.

If we go on to the participles, we still find nothing peculiarly Teutonic in English. The form *ing* is, in pronunciation, far more like the French *ant* than the German *end*, and the German *end* is in spelling more like the French *ant* than the English *ing*. The form *ed* is like both the Latin *t* and the German *et*, and more like the Spanish *d* than either; but the English *ed* differs from all three in having lost a capacity for further inflexion, which appears in the Latin *t-us* the German *t-er*, and the Spanish *d-o*.

In the auxiliary verbs, which French, German, and English, all use for the passive voice, French agrees with German more nearly than German with English. There are two words signifying *existence*, which run through the Aryan languages; they are represented by the German *seyn*, *bin*, etc., and by the Latin *sum*, *fui*, etc. But where the German uses one of these verbs as an auxiliary, the Englishman seems persistently to take almost every opportunity of using the others. If the German says *ich bin*, the Englishman says *I am*;* if the German says *sey es*, the Englishman says, *be it*; if the German considers how *es sey*, the Englishman considers how it *may be*; if the German says *ich bin gewesen*, the Englishman says *I have been*. In the use of these verbs the Frenchman is far more like the German; he says, *qu'il soit*, and *j'ai été*; and if *j'étais* looks rather un-German

* Rustics, however, still often say *I be*.

it must be remembered that the Latin *er-am* is as near to *ich war* as *ich war* is to *I was*.

So far, then, we have failed to discover what is the mark of a Teutonic language, and we must therefore go back to the formation of the perfect active. It is admitted on all hands that the German *te* and the English *ed* simply represent some form of the word *did*. *I walked* is simply *I walk did*, *I worked* is *I work did*. But it is also admitted that this discovery takes us only one stage nearer the true formation of the perfect, because if *I walk did* is the perfect of *I walk*, we still want to know why *did* itself is the perfect of *do*. And here we get back to the original formation of the perfect in the Aryan languages. It was accomplished by the reduplication of the root, which reduplication was commonly accompanied by a modification of the vowel. Thus *I did* is only what is left of *I dodo*, or *I dedo*, or *I dido*, or *I dide*. And in a similar way are those perfects explained which have no trace of the auxiliary *do*, as for instance *rang* from *ring*, *sat* from *sit*, *gave* from *give*. In these cases it is supposed that the original reduplication has merely been lost, while the modification of the vowel has remained. But it happens, unfortunately for our present purpose, that, whether the explanation commonly given is correct or not, those German and English perfects which are not formed by the addition of *did* are no more exclusively Teutonic in their formation than they are Latin, in which language exist the similar forms, *cepi*, *tuli*, etc.; and these in turn are well illustrated by such forms as *tutudi*, *cecid*i, etc.

Our Teutonic mark, then, is not an unvarying sign characteristic of all Teutonic perfects, but only a mark which is sometimes present, sometimes absent. If a naturalist were asked, "What distinguishes pigeons from other birds?" and were to answer, "Some of them act as winged messengers," he would give as good an account of pigeons as a philologist can apparently give of the "Teutonic" past tenses. And if the naturalist were further asked, "What distinguishes birds from other vertebrates, and were to answer, "Some of them, called pigeons, act as winged messengers," he would give as good an account of birds as the philologist can apparently give of the "Teutonic" class of languages.

And even in the use of this auxiliary verb *do*, the English language differs enormously from German. A German, it is true, can say *ich machte*, as the Englishman can say *I made*; but he cannot, with the Englishman, say emphatically *I did make*, or *I do make*. *Ich that machen*, or *ich thue machen*, would be not one whit less absurd in German than was in French Voltaire's famous translation of "How do you do?" into *comment faites vous faire*?

It seems, then, that there is no certain mark of a Teutonic language. A philologist might possibly show that the English language has as many forms historically traceable to a Low German as to all other sources. This is doubtful, but it is not the point in question, because the philologist cannot maintain such a proposition without at once admitting the mixture of grammars. If ninety per cent. of the English grammatical forms were traceable to a Teutonic origin, and only ten per cent. to an Italic origin, the non-hybrid theory would be as untenable as though the proportions were reversed, or as though half could be traced to one parent, and half to the other. And a fair estimate would probably show that barely one half of our remaining grammatical forms can be called Teutonic even by pedigree, while that half is not, as we have seen, exclusively Teutonic in form.

A philologist might, also, make an answer which would be practically identical with that which has just been discussed, though not, like that, dependent upon history. He might say that, even if no single mark be characteristic of a Teutonic language exclusively, there is still a certain combination of marks which can be found only in the languages to which he applies that name, though nearly every one of those marks may be individually found elsewhere; but then he would be compelled to take up the same ground in the case of the Italic class, and it would be seen that the combined features which distinguish the Italic class from High German are precisely those which constitute the difference between High German and English. Those features are the formation of the plural in *s*, and what Bopp has called "the formation of words." A classification on the principle of combined features would, therefore, bring English into two classes at once; or, in other words, would amount to a demonstration that a hybrid grammar actually exists.

In the investigation of a subject for which a place has been claimed on a level with the physical sciences, it cannot be wrong to apply a test similar to that by which comparative anatomy is tried every day. When the bone of any known animal is discovered, the anatomist is able to distinguish it from the bones of other animals; he can tell us to what kind of animal the bone belonged. If there really are any well-marked classes of language, philology ought to be able to do as much for us with a fragment of any class, as anatomy can do with a single bone. But let us suppose the following fragment to be dug up some thousands of years hence in the neighbourhood of the ancient Delphi:—

"Philologist attend; unanswerable facts attest my utterances; languages must be classed according to grammatical forms, which never intermingle, never create confusion in a single class."

This is a fair statement of the non-hybrid theory; but let us see

how far the words themselves are their own confirmation, and whether a philologist could say at once to what class of languages they belong. *Philologist* is a word more Greek in form than Greek itself; a Greek would have been content to say simply φιλόλογος. *Attend* is a word belonging to the Italic vocabulary, but shows no inflexions of any kind. *Unanswerable* is a word with two elements belonging to the German and one to the Italic class; but the Italic portion of the word, if any, is within the province of grammar. *Facts* is a word belonging to the Italic vocabulary, with an inflexion common to many languages, but not found in High German. *Utterances* is a word formed from the Teutonic *utter*, by the addition of an Italic substantival form and an inflexion common to most Aryan languages except High German. It would be tedious to carry the analysis further, but it may be worth while to point out that as *philologist* is more Greek than Greek, so *grammatical* is more Latin than Latin itself; and yet these two words are, perhaps, more frequently used than any others by the advocates of the non-hybrid theory. And in the whole of the sentence which has just been partly analysed, there is no grammatical form which is exclusively German, while there are four which have no existence in the language called High German, except as parts of imported words.

Although this investigation has incidentally shown the contradictions which vitiate the present classification of languages according to grammatical forms, the immediate object of the inquiry was, it will be remembered, to discover whether the most formidable position of the ethnophilologists could be maintained. It was necessary to know whether the tongue has really shown itself to be, not only an unruly member, but master of the mind, before we could feel any confidence in abandoning the classification of races according to language. And during the attempt to arrive at a conclusion on this point, the "Teutonic" grammar disappeared little by little, until nothing was left but one form of one of the tenses of its verbs. Unless, therefore, the philologist admits a mixture of grammatical forms, he must declare that grammar is limited to one form of a past tense; and the assertion that grammar cannot be mixed will then amount to no more than the assertion that no form can exist and not exist at the same time. But this doctrine will not in any way embarrass the ethnographer.

Since then it appears that, even if we would allow the typical Teuton to be "one who speaks a Teutonic language," we should still find it impossible to define a Teutonic language itself, we must ask, What is better than language as an index to race? If we betake ourselves to physical or mental characteristics, a process similar to that which we have just applied to language will lead us into what appears, at first sight, to be a similar difficulty. We shall find that, whatever

marks we fix upon as characteristic of a Teuton, those marks are not possessed by all who are called "Teutons," and are possessed by particular individuals among races bearing other names. But the objection is really no more than a verbal quibble. It is a fact that the Aryan languages have not yet been divided into classes between which there are well-marked grammatical differences; but it is no less a fact that European head-forms have been divided into classes which cannot be mistaken one for the other. Take one class of Aryan languages, and it is impossible to say precisely what distinguishes it from all other classes; but take a class of heads in which the length bears any definite proportion to the breadth, and everything outside the given limits is outside the class. Ethnographers, however, do not pretend that any class of heads is coextensive with any ethnic name; they deal not with names but with facts; and very few of them have ever gone so far as to assert that hybrid races are impossible.

There are two great classes of skulls, the long and the short; and they are distributed over the whole of Europe, but by no means in equal proportions. If the measurements of the heads of a thousand Londoners and of a thousand natives of Berlin or Bremen were taken at random, and placed, thousand by thousand, in the hands of one of our best anthropologists, he could pronounce at once which were the measurements of the English, and which of the Germans; but he would not feel any confidence in giving an opinion on a single skull. There is no doubt that the inhabitants of England have, as a rule, the longest skulls of any European people, except, perhaps, the Highlanders of Scotland, and the inhabitants of some parts of Ireland. The Germans, on the contrary, have, as a rule, skulls remarkable for their shortness; in other words, the majority of the Germans belong to one ethnological class; the majority of the English to the opposite class.

We cannot, perhaps, even now, answer the question, "What is a Teuton?" without excluding from the class natives of Germany, whose ancestors have lived in that country for many generations; but, if *Teutonic* be equivalent to *deutsch*, a *typical* Teuton is one of the short-headed class of mankind. We may not be able to say precisely how far the signification of the word is to be extended; we may not be able to assert that all round-headed people should be called Teutons, nor that all long-headed people should be called Englishmen. But we may at least say that to call an Englishman a Teuton is an abuse of language. Either it is equivalent to saying that no ethnical distinctions are anywhere to be found, in which case the expression "Teutonic race" is utterly meaningless; or it is equivalent to saying that the majority of Germans have been called Teutons by mistake.

One of the chief marks of distinction in all races is, according to the leading anatomists, to be found in the shape of the skull. Professor Huxley* has gone so far as to class the ancient Phœnicians, and all the ancient long-heads of the Mediterranean coasts, with the long-heads of modern Europe. This is startling to us after all that we have been taught in our youth ; but it is not the less a sound classification, if the number of skulls, or artistic representations, be sufficient to establish the length of the ancient heads. The application of a similar principle to the Germans would probably include in the same class with them the Lapps, the Finns, and perhaps some of the races called Slavonic. Then, of course, would arise the question, How are all these races to be distinguished from the Teutons? This might, perhaps, be done in a variety of ways : by minor differences of physical characteristics ; by differences of mental characteristics ; or simply on the principle of geographical distribution. But there cannot be a doubt that, in all scientific questions, an accurate and universally received nomenclature is of the utmost importance. There is, I believe, no dispute about the fact, that most Germans belong to one of the two grand anatomical divisions of the human family, most Englishmen to the other. But in order that we may settle satisfactorily those questions of race, with which are bound up some of the most interesting and important objects of human enquiry, we ought to have a clear and rigorous definition of terms. I do not presume to say more than that a *typical* Teuton belongs to a well-marked class of human beings ; and I hope those who frequently use the word will come forward and answer, more precisely, the question, What is a Teuton ?

L. OWEN PIKE.

KNOX ON THE SAXON RACE.

Those who pride themselves on the unsullied racial purity and invincible character of the Conventional Briton, will receive a severe shock on reading De Foe's *True-blooded Englishman*, or, indeed, on becoming acquainted with the history of England. The British islands have been invaded and conquered so frequently, that their

* *Prehistoric Remains of Caithness*, p. 130. Professor Huxley attaches less importance to osteological resemblances than to resemblances of skin and hair. But it must be remembered that when we travel back to extreme antiquity, the osteological evidence is all that remains.

present inhabitants must be considered as either the most mongrel of races, or a *mélange* of distinct races, according as we incline to the hypothesis of amalgamation, or the reverse. Speaking conventionally, all the natives of Great Britain and Ireland, our vast colonial possessions, and millions of subjected races, are Britons. We recognise four distinct nationalities,—as English, Scotch, Irish, and Welsh. But when we attempt to ascertain the true racial cognomen of the English, we are deafened by a Babel of conflicting scientific voices proceeding from anthropologists, ethnographers, philologists, historians, etc. There is wisdom in a multitude of counsellors ; but—

“ Who shall decide when doctors disagree ? ”

What are we English ? Does any one know ? Are we British, or Gaels, or Teutons, or Cymri, or Romans, or Belgians, or Saxons, or Angles, or Danes, or Norse, or Jutes, or Frisians, or Scandinavians, or Normans ? Are we an amalgamation, or are all these types found tolerably pure on our soil ? We had got it so comfortably settled that we were a Germanic, or Teutonic, or Saxon people, using the term Saxon in a generic sense, because a great number of Germans were called by the name of a small tribe, just as all Hellenes were called *Greeks* by the Romans. Angles and Saxons were used as convertible terms, and when we were asked what we were, we proudly replied Anglo-Saxons ! Somehow or other we got over the difficulty that the Saxons are a light-haired, blue-eyed, fair race, and that not one in ten of the people we meet answers to this description. As to the beauty of our Saxon ancestors, was not *that* settled by the well-known anecdote of the Roman Pontiff who punned on the English fair-haired youths in these words : “ *Non Angli sed Angeli, si fuissent Christiani* ” ? But when we spoke nationally, we called ourselves Britons, asseverating that Britannia ruled the waves, and that Britons never would be slaves ; quite forgetting the awkward fact that the Britons have been slaves from the earliest recorded period ; from the time when they permitted their Druids to burn batches of them in wicker cages ; during their successive subjugations by the Romans, Saxons, Jutes, Angles, Danes, and other Northern pirates, to the last conquest by the Normans, from which neither Saxons nor British have thoroughly recovered. Cicero says, the ugliest and stupidest slaves came from Britain ! and urges his friend Atticus “ not to buy slaves from Britain, on account of their stupidity, and inaptitude to learn music and other accomplishments.” Cæsar writes, “ In their domestic and social habits the Britons are regarded as the most savage of nations. They are clothed with skins, wear the hair of their heads unshaved and long, but shave the rest of their bodies except the

upper lip, and stain themselves a blue colour with woad, which gives them a horrible aspect in battle."

The brave Britons who never would be slaves, had grown so effeminate while enslaved by the Romans, that after the withdrawal of the legions, they were unable to protect themselves from the incursions of the Picts, and whined to the Romans for help thus: "To Aëtius, thrice Consul! The groans of the Britons. Driven by our barbarous enemy to the sea, and from thence back upon the barbarians, we have only left us the choice of a grave; either to be killed by the one or drowned by the other." As the Romans could give them no more help, our brave ancestors preferred, to the alternative of liberty or death, calling in the Saxons, and subjecting themselves to a new slavery, which lasted upwards of six hundred years, until the battle of Hastings transferred both Britain and Saxon to the iron rule of the Norman.

Knox touches the invincibility of the Briton with a graphic pen. Rambling on the sea beach near Folkstone by moon-light, he thus records his impressions:—

"At no great distance lay Hastings, that bloody field, surpassing far in its terrible results the unhappy day of Waterloo. From this the Celt has recovered, but not so the Saxon. To this day he feels deeply the most disastrous day that ever befel his race; here he was trodden down by the Norman, whose iron heel is on him yet. Here William found a congenial race, driving with them into Northern England the Saxon race, and here was all but annihilated the liberties of mankind: the question which transcends all others—whether man is to be a free man or a slave—was nearly settled at Hastings. To this day the Saxon race in England have never recovered a tithe of their rights, and probably never will. As I thought over these great events [great, not from the handful of men who boldly cut each other's throats at Hastings, like stout yeomen and good Christians, but great beyond all expression when viewed as a contest of principle, of race; freedom against slavery; the reign of the law against the reign of the sword, whose most terrible evils still subsist in England, untouched and unassailed], I bethought me of visiting the bee-hive-looking village, not altered, I believe, since Harold's time, clustered on the slope of those white cliffs so celebrated in English song. A vulgar, filthy, mechanical wall and rail crossed the village, but clearing its low, ill-shaped arch, the sea-beach was once more before me, with ships high and dry on the strand, in no ways larger than what accompanied William on that grand voyage when, true to his race, he singled out England as his antagonist—Saxon England, freed at the time from continental despotism, continental slavery, continental dynasties. Here, on this strand, I heard the sound of revelry proceeding from a small inn or alehouse, frequented no doubt by tradesmen and fishermen. Music it was not—it would be a profanation of the term to call it so; a body of jolly companions were roaring the ditty called "Rule Britannia," and how Britons never would be slaves, on that very spot where these

Britons were beaten to a stand-still by the single force of an adventurer, and their country subjected to the most abject slavery ; an enduring slavery, never to be overcome." (P. 135.)

Verily nothing is sacred in these revolutionary days. Our scientific, our theological faiths are rudely attacked. Ruthless writers, like Mr. Matthew Arnold, Mr. Pike, and others will no longer permit us to believe ourselves an Anglo-Saxon race. Those who think the English Saxons, depict the Anglo-Saxon as everything that is good. The opposite school think him everything that is bad. Mr. William Maccall has written a lively sketch of "The Fabulous Anglo-Saxon."* After depicting the exaggerated praises heaped on this being, he observes, he tried to discover who the Anglo-Saxon was, and he is "compelled to avow that the Anglo-Saxon is a wholly fabulous personage ; or that if he exists or has existed, he has always been a dunce, a dupe, driveller, and a drudge." It was not a pure Celtic race which the Romans conquered. "Were, however, the Romans monks ?" They must have blended with the British. Were not the Danes as likely as the Saxons "to cut a keen and deep signature of themselves in a nation's fate by the brain and heart as well as by the sword ?" "It is forgotten that the Norman conquest was not, like the Danish conquest, a Scandinavian victory. When the Norsemen seized a large and noble region of France, how soon the blue eyes, the golden hair, the fair complexion of their ancestors vanished ! Beyond valour and a stalwart frame, the Normans brought with them to England few of the Scandinavian characteristics. Their eyes were black, their complexions were swarthy, and by both, their descendants are recognisable." He thinks England chiefly indebted for culture and civilisation to the Normans. "Under the sway of Anglo-Saxonism England proper stagnated and decayed ; by the intermixture of livelier blood it began to move and to march ; by the help of Ireland, Scotland, and Wales, it can boast of being the most solid and magnificent empire on the globe." He attributes to the Germans "four principal characteristics, breadth, massiveness, persistency, lethargy ; the elastic, electrical, sympathetic qualities are all absent. Aggressive the race can never be, etc. Nothing can much modify or stir the inherent apathy of the Germanic temper. Carrying to excess whatever is loutish and lumbering in the Germanic race, the Anglo-Saxons were distinguished in an extraordinary measure by the Germanic repulsiveness. It was their destiny, like that of the Germanic race generally to be absorbed instead of absorbing." But England's obligations to the Anglo-Saxon are considerable. "A man cannot sit without a wherewith ; but the wherewith, though an indispensable, is not deemed the divinest

* *National Reformer*, Feb. 25, 1866.

part of the human frame. Anglo-Saxonism is England's sitting part ; they, however, who have a stalwart and exuberant sitting part are too much inclined to sit still ; and England, when simply sitting still and doing nothing, has always boasted of this as a very great merit indeed."

Earl Russell's policy "of a masterly inaction" may be thought to serve as an illustration of Mr. Maccall's analysis of this invaluable Anglo-Saxon quality. He continues : "A certain obese conservatism and a certain navy vigour constitute England's debt to the Anglo-Saxon. They help England doubtless, but how much they hinder, and at what enormous expense they are obtained ! He thinks enlightened Scotchmen and Irishmen detest an Englishman in the exact degree of his Anglo-Saxonism—appreciate and admire him in the exact degree that he diverges therefrom, and that foreigners herein agree with Scotch and Irish." He then draws a comparison between the Anglo-Saxon and the Norway rat, which has almost exterminated the black rat, once common in England. The exterminating rat "has sundry salient Anglo-Saxon faculties, and should therefore be duly revered and admired. He is a dull, heavy, voracious rat, and he has overwhelmed a livelier, more valiant, more gifted race, not by courage, scarcely even by strength, but by sheer ponderosity." Another point of resemblance "is his pride and purity of breed. His sluggish blood he jealously guards from contamination. All alliance with strangers he obstinately and fiercely shuns." Mr. Maccall might have strengthened the comparison by pointing out the analogy between the light-haired Saxon, and the colour of the invading rat, which is a light brown above, and a dirty white below ; and that between the black-haired swarthy Celt, and the almost exterminated British black rat. He concludes "that either the Anglo-Saxon is a wholly fabulous personage, or that wherever his influence can be distinctly traced, it is the least noble and vital of the forces to which England is indebted for its eminence as conqueror and coloniser. Let us leave Anglo-Saxonism to prigs, bookworms, and blockheads, and call ourselves simply and frankly Britons or Englishmen."

We shall now lay before the reader an abstract of the views of Knox, who delineates impartially the good and bad qualities of the Anglo-Saxon.

"Of the origin of the Saxon or Scandinavian race we know as much as of the origin of man—nothing. In remote times, a race of men differing from all others, physically and mentally, dwelt in Scandinavia—in Norway, Denmark, Sweden, Holstein—on the shores of the Baltic, by the mouths of the Rhine, on its northern and eastern bank. Their various irruptions into civilised Europe were due to their in-

ordinate self-esteem; to their love of independence, which makes them dislike the proximity of a neighbour; to their hatred for dynasties and governments; democrats by their nature, the only democrats on the earth, the only race which truly comprehends the meaning of the word liberty. The race was early in Greece, say 3,500 years ago, and contributed mainly, no doubt, to the formation of the noblest of all men—the statesmen, poets, sculptors, mathematicians, metaphysicians, historians of ancient Greece. The Saxon element is gradually becoming extinct in the south of Europe, returning and confined to the countries in which it was originally found—Holland, West Prussia, Holstein, the northern states of the ancient Rhenish Confederation, Saxony Proper, Norway, Sweden, and Denmark. The Saxon of England must have occupied eastern Scotland and eastern England as far south as the Humber, long prior to the historic period, when the German Ocean was scarcely a sea. The Danes and Angles who attacked South England, did not make the same impression on it. South England remains in the hands of the original inhabitants, a Belgian race. The geographical position of the Saxon is in Europe, intersected and amalgamated with the Sarmatian and Slavonian; with the Celtic in Switzerland; deeply with the Slavonian and Fleming in Austria and on the Rhine; thinly spread throughout Wales; in possession, as occupants of the soil, of northern and eastern Ireland. Carrying out the destinies of his race, obeying his physical and moral nature, the Anglo-Saxon, aided by his insular position, takes possession of the ocean, becomes the great tyrant at sea. Ships, colonies, commerce—these are his wealth, therefore his strength. A nation of shopkeepers grasps at universal power; founds a colony, such as the world never saw before; loses it as a result of the principle of race. Nothing daunted, founds others, to lose them all in succession, and for the same reason—race. A handful of large-handed spatula-fingered Saxon traders holds military possession of India. Divided by nationalities into different groups—as English, Dutch, German, United States man, cordially hating each other, the race still hopes to be ultimately masters of the world” (Pp. 45 to 49).

Let us consider physical and mental qualities. “The Saxons are a tall powerful athletic race of men; the strongest as a race on the face of the earth. They have fair hair, with blue eyes, and so fine a complexion that they may almost be considered the only absolutely fair race on the face of the globe.” (P. 50.)* This seems to dispose of the pretensions of those who consider the English a homogeneous Saxon race. We may see daily the fair-haired Saxon type forming a marked contrast with the swarthy, black-haired Celt and Belgian. Who can doubt that the blonde and brunette types are descendants from distinct

* “Homer must have seen a Scandinavian woman, else he could not have described Penelope. The complexion he assigns her exists in no other race” (p. 473).

races? In spite of so many centuries of interblending or miscegenation, the present occupants of Britain present a great variety of types, morally, physically, and mentally distinct, as admirably stated by Mr. D. Mackintosh, F.G.S.* Either, races have not intermingled to the extent supposed, or each race depurates itself from the mixture of alien blood, in obedience to a physiological law insisted on by Dr. Knox. We have quite recently heard it stated, as a result of many years' study and personal observation, that it was impossible to mix the blood of races, or even of individuals; and that the children of parents of different temperaments never combined the temperaments of both, but reproduced respectively those belonging to one or the other.† An opinion which derives some countenance from the following by Mr. Mackintosh: "There would appear to be types which have become sufficiently hardened to resist amalgamation, and even in England many phenomena would seem to indicate that hybridity is followed by extinction or reversion to the original. In some parts, where interblending has occurred to a considerable extent, we still find distinct types identifiable with those which may be classified in remote and comparatively unmixed districts, and very frequently two or more types may be seen in the same family. In many cases, typical amalgamation does not apparently take place at all, but the children of two parents of distinct types follow or 'favour' the one or the other parent, or occasionally some ancestor more or less remote."

Some time ago, Mrs. Somerville drew attention to the alleged decrease in the number of fair and light-haired persons, the cause being ascribed to the prejudice against yellow and red hair, and the matrimonial preference for dark-haired women. If this be true, public taste has signally altered. Fair-haired women are, or were till recently, so much in the ascendant, as to cause a very general alteration in the colour of dark hair by artificial means.‡ We have long been of opinion that, as in friendship, persons are attracted by contrast, rather than by similarity, so, in the relation between the sexes, men and women mutually are attracted by their physical as well as psychical opposites. In plain words, it has almost passed into an axiom that dark like fair, and fair like dark. It would be an interesting anthropological inquiry to discover by personal observation how

* "Comparative Anthropology of England and Wales," *Anthrop. Review*, Jan. 1866.

† See report of discussion at Anthropological Society on a paper entitled "Europeans, and their Descendants in America." April 14, 1868.

‡ See "Red Hair," a letter by J. McGrigor Allan, F.A.S.L., in *Public Opinion*. July 20, 1867.

far marriages prove the truth of this opinion.* This love of contrast, however, has its limits, and appears only to exist between closely affiliated races. The white races all entertain more or less antipathy for the dark. This antipathy is far greater in the fair northern races than in the dark southern races of Europe, and in the Saxon, "the only absolutely fair race," it reaches its acme. "There is no denying the fact," writes Knox, "that the Saxon, call him by what name you will, has a perfect horror for his darker brethren" (p. 230). "The Saxon will not mingle with them (Mexican Indians); the Spaniards, the Celts, and Iberians would, but not the Saxon" (p. 262). "No Saxon will mingle with dark blood; with him the dark races must be slaves, or cease to exist" (p. 263).† The generality of British and Americans hate the Negro like poison. The philanthropic northern lady, loving the blacks so deeply *in theory*, is well characterised in this speech of Topsy: "Missis would as lieve touch a toad as me." It appears to be a natural antipathy which all the platform philanthropists of new and old England will never be able to remove. And if they did, what would become of the political and religious capital now made out of the stereotyped subject—the wrongs of the Negro? Othello's occupation would be gone with a vengeance! What multitudes of white old women of both sexes would be at once thrown out of employ!

* It would be necessary to confine our observations mainly to the humbler classes, where marriages are no doubt still made from *affection*. In the upper and middle classes, marriage is far too much an affair of the stock-exchange to form a correct criterion of the unbiassed tastes of matrimonial speculators. Hearts have been defined as little red things, which men and women play with for money.

† The Dutch at the Cape (Saxon) have a perfect horror of the coloured races; it extends to the mulatto, whom they absolutely despise. The placing a coloured man in an important official situation in South Africa, has caused to Britain the loss of some millions, and laid the basis for the ultimate separation of that colony from Britain (p. 473). "Whilst I write [case of Dr. Thompson, a native of India, at this moment before the House of Commons], the Saxon government of England refuses to admit into the medical service of the English army a native of India, on the ground of his being, to a certain extent, a coloured man. The Under-Secretary of State denies that the ground of refusal is *colour*; but I know that it is simply *colour*,—that is, race. The hypocrisy of the Anglo-Saxon tries everywhere to avoid this question, which meets him, in one form or another, in every part of his heterogeneous dominions. He tries to make it appear that medical men being employed in all climates, a native of India is not a suitable person to enter the service! Profound hypocrisy!" (p. 564). We have heard a young British officer speak of a Hindoo of high caste as "a nigger." The contempt with which the Colonial Office treated the letter of the late Emperor Theodore, caused the detention of the captives, a costly war, and the death of a brave man! Bureaucratic insolence, founded on racial antipathy, has taken five or six millions out of John Bull's pocket.

To continue our abstract from Knox : " The Saxon is fair, not because he lives in a temperate or cold climate, but because he is a Saxon. Thoughtful, plodding, industrious beyond all other races, a lover of labour for labour's sake ; he cares not if its amount be but profitable ; large-handed, mechanical, a lover of order, of punctuality in business, of neatness and cleanliness. In these qualities no race approaches him ; the wealthy with him is the sole respectable ; the respectable the sole good ; the word comfort is never out of his mouth—it is the beau-ideal of the Saxon. His genius is wholly applicative, for he invents nothing. In the fine arts,* and in music, taste cannot go lower. The race in general has no musical ear, and they mistake noise for music. The marrow-bones and cleaver belong to them ; prize-fights, bull-baiting with dogs, sparring-matches, rowing, horse-racing, gymnastics ; the boor is peculiar to the Saxon race.† When young, they cannot sit still an instant, so powerful is the desire for work, labour, excitement, muscular exertion. Their self-esteem is so great, their self-confidence so matchless, that they cannot possibly imagine any man or set of men to be superior to themselves. Accumulative beyond all others, the wealth of the world collects in their hands (52, 55). Notwithstanding the wealth of the Anglo-Saxon, no nation presents such a frightful mass of squalid poverty and wretchedness, rendering it doubtful whether such a form of civilisation be a blessing or a curse to humanity. I lean with Tacitus to the latter opinion" (57). " No race perhaps exceeds them in a love of fair play ; *but only to Saxons*. This, of course, they do

* " It has been seriously proposed, and that from a very high clerical quarter, that there should be none but draped statues in the Crystal Palace, where the enthusiastic art-student may feast his eyes on correct reproductions of the master-pieces of sculpture, collected from every gallery in Europe. The Roman empire fell from Vandalism without ; but our Vandalism is within. An exceedingly narrow-minded gentleman, from a provincial town, once favoured me with his opinions on the statues of Venus and Apollo in the British Museum, and also on the casts in the Crystal Palace. The Goth agreed with the clerical dignitary to whom I have referred, and thought it extremely improper that such statues should be exhibited. " Think of their effect on young men from the country." He went on to make such remarks respecting these matchless creations, as sufficiently proved to me, that the grossness and impurity of his own ignorant and wanton mind formed a veil impenetrable by all ideas of beauty. " There are countenances," says John Sterling, " far more indecent than the naked form of the Medicean Venus." Such is the Saxon British Philistine !—*The Intellectual Severance of Men and Women*, by J. McGrigor Allan, F.A.S.L.

† Dr. Knox might have added, hunting, shooting, fishing, coursing, and possibly some other gentle amusements, all involving the most horrible cruelty to animals, indulged in by the upper classes of the nation, whose boast it is to teach the nations how to live !

not extend to other races. Aware of his strength of chest and arms, he uses them in self-defence; the Celt flies uniformly to the sword. To-day and to-morrow is all the Saxon looks to; yesterday, he cares not for; it is past and gone. He is the man of circumstances, of expediency without method; "try all things, but do not theorise." Give me constants is his cry. Hence his contempt for men of science; his hatred for genius arises from another cause; he cannot endure the idea that any man is really superior in anything to himself. The absence of genius in his race he feels; he dislikes to be told it; he attempts to crush it wherever it appears. Men of genius he calls humbugs, impostors" (58.) If we admit this portraiture, it is evident that Shakespere, Milton, Bacon, Newton, Locke, and the long roll of Englishmen of genius could not be Saxons. For these we must look to other sources. Knox particularly informs us that Saxon literature must not be confounded with modern German literature, which is of Slavonian origin. The word German is equivocal. It misled Arnold, Niebuhr, and others. "My countrymen have confounded the literature of the middle, South German, and Slavonian races, with the Scandinavian or North German; nothing was ever more distinct."*

In Lecture VIII, "Who are the Germans?" Knox observes: "What is the quality of mind which most distinguishes one race from another; one individual from another; man from woman; the dark from the fair portion of mankind? The power of generalisation, of abstract thought, of rising from detail to general laws. There is a small knob of bone growing upon the inner side of the arm-bone of man, in most persons scarcely apparent. All the Saxon nations on earth could not, in twenty centuries, have explained the nature, the meaning of this nodule of bone; perhaps might never even have observed its presence. But from a race of men in central and southern Germany, the countries on the Upper Rhine and Danube, this, and a thousand other phenomena, inexplicable by the men of material interests, matter-of-

* "To the South German, to the mixed race of Slavonian and German origin, we owe this doctrine of transcendental anatomy,—to that imaginative race, to whom we owe all that is imaginative, romantic, and transcendental in the so-called German language and German people. To the true Saxon, the classic German, the Swede, the Dutchman, the thoroughbred Englishman, the Saxon,—when pure,—the men of material interests, the men abounding in common sense and occupied with the business of the day, what signifies to such men the metaphysics of Kant, the reveries of Schiller and Schlegel, the music of Beethoven, the transcendentalism of Oken, of Spix, of Goethe, and of Humboldt?" (p. 169).

"A noble mind builds St. Paul's,—a copy it is true, and an imitation of a greater, but a noble imitation, satisfying all minds. The thing is vaunted as national! native! Straightway, as if to unmask the imposture, a certain building appears in Trafalgar Square: a hideous bronze or two show themselves about Hyde Park,—natives, no doubt; quite original" (p. 453).

fact men, men of detail, Saxon men, there met with a full and complete elucidation. The men of South Germany (Slavonians) discovered the transcendental theory of organic bodies—the greatest discovery ever made, not even excepting that law of gravitation—that theory of fluxions, a discovery shared with Newton by the German Leibnitz.

“All that is free in Saxon countries, Saxons owe to themselves; their laws, manners, institutions, they brought with them from the woods of Germany, and they have transferred them to the woods of America. They owe nothing to any kings, or princes, or chiefs; originally, they had neither chief nor king, a general in war was *elected* when required.”

It seems that it is not to the Anglo-Saxons we are indebted for that truly British Red Tape Institution, the divided authority of the Horse Guards and the War Office. A method of conducting the public military service with precision, dispatch, and official responsibility which would not be tolerated by despotic continental governments. But John Bull is too well aware from experience of its many advantages to part with it in a hurry!

“In their ideas of ‘property in land’ they differ also from other races; they do not admit that any class or family, dynasty or individual, can appropriate to himself, or to his hereditary heirs, any portion of the earth’s surface. Hence their abhorrence for feudality, tenures, hereditary rights, and laws of primogeniture.” (P. 59.)

“No Saxon man admits, in his own mind, the right of any individual on earth, be he who he may, to appropriate to himself and to his family, whether to the eldest or any other son, any portion of the earth’s surface to the exclusion *in perpetuo* of the rest of mankind; but sensible that the earth must be cultivated by some one, which cultivation never can give any further right in the soil than the value imparted to it by the labour of the *ad vitam* occupant; treating it, in fact, like any other goods or chattels, he makes it liable for the debts of the occupant, and further ordains that at his death it shall be sold to the highest bidder, for the behoof of widow, children, and creditors, if any; the ultimate object being to restore the land to the community at large. If it be otherwise in many parts of England, it is because the government is not Saxon but Norman; that is, the government of a dynasty and aristocracy antagonistic of the race. Were the evil attaining any great magnitude, it would revolutionise England. But to revolutionise is Celtic; to reform, Saxon; and so, probably with time, feudality and primogeniture, the two greatest curses that ever fell on man, may, at last, peaceably be driven from this semi-Saxon country. Still, I have some doubts of this. It is the last stronghold of the Norman dynasty and their defenders; and the question may yet, even in England, be decided by the sword. It was introduced, no doubt, into England chiefly by the Norman conquest, the greatest calamity that ever befel England—perhaps the human race.” (P. 328.)

Had Knox lived to witness the pulling down of Hyde Park railings on the memorable evening of July 23, 1866, he would have characterised that Reform demonstration as a rising of the Saxon people against the Norman government, and would, no doubt, have adduced it as another illustration of the war of races.

"Soldiers and soldiering they despise as being unworthy of free men; the difficulty of teaching them military discipline and tactics arises from the awkwardness of their forms and slowness of movement, and from their inordinate self-esteem. But when disciplined, their infantry, owing to the strength of the men, becomes the first in the world." (P. 59.)

M. Thiers has admitted that the French have never withstood the British troops charging with the bayonet.

"The Saxon despises soldiering, so that his armies generally are heavy, cumbrous, and expensive. He is trained or disciplined with great difficulty. The *pure English peasantry* make wretched soldiers; they have neither the shape nor the qualities fitting them for war. The proper field for action of the Saxon is the ocean."

May not the great reputation of Scotch and Irish regiments be traced to Celtic valour? The loyal Irish and the Highland Clans terrified Saxon England, and nearly succeeded in replacing the Stuarts on the throne.*

"The Saxon is not warlike, and he hates unprofitable wars; but he is as brave as any man, and his strength and obstinacy make him a formidable enemy. As the Saxon, by becoming a soldier, loses the esteem of his fellow-Saxons, so the status of the English soldier in society can never be raised; the meanest independent labourer despises him; he has sold his independence, the natural birthright of the Saxon." (P. 472.)†

"Man sinks rapidly in the scale of civilisation when removed from the great stream. At the third generation, the Saxon boor, in a remote land, sinks nearly to the barbarian; active and energetic, no doubt, still a Saxon, but not the less a boor and a vulgar barbarian." (P. 62.)

The prophetic saying of Gibbon, Knox considers applicable to the European Saxon wherever found.

"Applicable to the descendants of those free and bold men who

* See "Knox on the Celtic Race."—*Anthrop. Review*, April 1868.

† Our own personal experience fully endorses these observations of Knox. We remember well on one occasion, hearing the fair-haired Saxon wife of a highly respectable artillery-serjeant, stating the reluctance with which she accepted her husband, *because he was a soldier!* All her neighbours, friends, and members of her family, thought she had demeaned herself by marrying a soldier. What a remarkable contrast does French public opinion, among a similar class, present to this Saxon antipathy to the military profession!

originally brought with them, in all their migrations from Scandinavia, those free institutions under which free men alone can live—trial by jury, and equality before the laws, protection of life and property; a race who obeyed no king nor chief; who resisted oppression in every shape, and to whom the most abhorred of all despotisms, a feudal nobility with laws of primogeniture, were unknown; amongst whom all were equal, all noble alike. To all this race, now crushed down by the Sarmatian and Celtic races of Europe; broken up, dispersed, enslaved; their lives and properties placed at the mercy of some five or six brutal families or dynasties; the very best blood of all the race, the Jutlander, the Saxon, the free man of Baden and of Wirtemberg, lorded it over by a few paltry families, unknown to fortune or renown (to Celtic republican (!) France they now know they need not look for aid in their next struggle for liberty; let Rome be a lesson to them); to all this race, and not to England alone, does this prophetic passage in Gibbon's works apply:—"Should it ever happen that in Europe brutal military despots should succeed in extinguishing the liberties of men, threatening with the same unhappy fate the inhabitants of this island (England), they, mindful of their Saxon origin, would doubtless escape across the ocean, carrying to a new world their institutions, religion, and laws." (P. 63.)

Can a race permanently change its locality, establish itself in a continent to which it is not indigenous? This profoundly practical question, so important to the colonising Saxon-British, Knox answers most decidedly in the negative. A Saxon cannot become an American, an African, an Indian, an Australian! No race can live and thrive in all climates. To the argument that England is a colony from Scandinavia, Holstein, and Jutland; Ireland seemingly from Spain; he replies that Britain was, prior to the historic period, probably united to Continental Europe, or separated by shallow water-basins, brackish-pools, not affecting greatly the climate.

"That colonies from opposite shores, crossing merely an inland sea, should succeed in establishing themselves on its margin or coast, need not excite any surprise. But when the same or other races attempt the colonisation of another and a different region—a zone of the earth distinct from theirs, a group of land and water, on which originated a distinct group of life, animal and vegetable—the case is widely different, as all history proves." (P. 121.)

But, he asks the Saxons,—

"Have you yet succeeded in substituting yourselves for another race? In south England, you overthrew the Fleming and the Norman at first; but William drove you back again into northern and central England: your government is strictly Norman; your dynasty—continental; your peasantry—slaves. Had a bridge connected Normandy with South England, your race would have been driven still further to the north by an antagonistic race, numerically as strong as your own. In Wales you have made no pro-

gress, your very language being rejected by the Cymri. In Ireland, your existence seems to me to depend on Orange-lodges, composed, no doubt, mostly of Saxon men. Eastern and southern Scotland is, no doubt, yours, but the Caledonian Celt still holds his country. Thus it would appear that, after all, Britain is not so thoroughly a Saxon colony as was thought; a repetition of *Hastings* under Napoleon would have closed its career as a *Saxon country*, and free men, of true Saxon blood, must have sped their way in ships and boats across the Atlantic, there to make their last stand for civil and religious liberty: these you have not in Britain, nor in Ireland; but in their stead a mighty sham which suits the age and times." (P. 138.)

As to tropical countries, even English people begin to admit that they cannot be colonised.*

"European inhabitants of Jamaica, of Cuba, of Hispaniola, and of the Windward and Leeward Isles, what progress have you made since your first establishment there? Cease importing fresh European blood, and watch the results. The European cannot colonise a tropical country; he cannot identify himself with it; hold it, he may, with the sword, as we hold India, and as Spain once held Central America; but inhabitants of it, in the strict sense of the term, they cannot become." (P. 108.)

"In western tropical Africa, the 'season' generally reduces England's efforts at colonisation to a dozen or two white men,—the result of a century's exertions on the part of England. Mighty England, with her fast-growing race, cannot colonise a single acre of a tropical African country: her flag, however, still waves over it, no African seemingly thinking it worth his while to pull it down. Two bold attempts were made, in my own time, to convert Central Africa into another India,—to discover 'a mine of patronage'; but it would not do. The first attempt was to fill the country with troops; commerce would have answered better; but our Norman government always prefers the bayonet to any other form of progress. Troops were sent in large numbers, composed of deserters, who had commuted their sentence of punishment into enlisting into a condemned regiment. Condemned they were, for few escaped the effects of the deadly climate. The second attempt was made by that profound statesman, Lord Russell. The open bayonet having failed, it was covered with a bale of goods, and sent up the Niger. A central fort, high up the Niger or Quorra, was wanted in the centre of tropical Africa,—a Fort Vittoria,—to enslave countless nations, hitherto free. The second experiment failed, like the first, to be repeated again, no doubt, at some future period." (P. 133.)

In a supplemental chapter, "Africa," Knox thus characterises our

* "Within the tropics, climate comes to the rescue of those whom nature made, and whom the white man strives to destroy, each race of white men after their own fashion;—the Celt, by the sword; the Saxon, by conventions, treaties, parchment, law. The result is ever the same,—the robbing the coloured races of their lands and liberty."

renewed attempts to get possession of Central Africa before the French, who are invading it from the north. He thinks it would be better for the unhappy Africans to fall under the power of the Celtic man, who deals mildly with the dark races.

"If, on the contrary, the Anglo-Saxon race prevail, and it now—after its usual quiet and seemingly inoffensive way—marches boldly on Central Africa, sending here a missionary, and there a captain of dragoons; now a German doctor, anon a troop of merchants, with a government agent and a missionary, merely to look after the interest of the natives, in a manner well understood in England, and well explained by Dr. Livingstone, also well known in India and in Australia, but nowhere better than in Caffraria,—then, woe to the coloured races of men! Their ancient and most implacable enemy is at last on their soil in force, and the United States of Africa may one day achieve for that continent what the race has all but effected in America,—the extinction of the aboriginal races of the land. Long ere this, the revolting traffic in slaves would have exhausted Africa also of its native race; but commercial and selfish England having, in the *interim*, lost America, and gained India with two hundred millions of ready-made slaves, and no longer requiring the services of the unhappy Negro, proclaims to the world that she will not tolerate the African slave-trade. But should Africa come into possession of the Saxon race, England's sham humanity will be of no advantage to that continent, so long as the colonising, conquering, intrusive race continue to hold for the Negro that unconquerable antipathy, or antagonism, which marks their intercourse with all the coloured races of men."

For Africa, he holds there is but one hope,—the establishment of an imperial government; not on the Napoleonic idea, but on the principles by which Augustus, Trajan, and the Antonines ruled the then known world. It is doubtful if such empires are now possible.

"They existed before the spread of Christianity and Mahometanism. Under an Augustus or an Antonine, man was free to worship the deity of his choice or of his belief,—to practise whatever religious folly he preferred: throughout Europe, at the present time, to cease to be orthodox,—to cease to conform, is to forfeit all, or most of the privileges of citizenship." (Pp. 554, and 555.)

"The future of Africa, to a certain extent, depends on the destinies of the two invading races—Gauls and Saxons. France may remain stationary in Algeria, or even retrace her steps without dishonour; for England there is no such alternative, nor, if there were, would commercial, energetic England accept of it. In advance of her colonists and armies, rush on the Saxon Dutch Boer, committing cruel devastation on the coloured races, and it were as disgraceful as impolitic for England to suffer this much longer. Thus, she must of necessity advance; such being, as is often said, 'the destiny of the race.' If the end resembles her course in America, India, and Australia, the future of the coloured races in Africa may easily be

foretold. And now, mark the difference in the mode of action of the two races. On one side, battalion after battalion are poured into Africa; on the other, meeting after meeting of shrewd, quiet, political men is held in London and Manchester, Oxford and Cambridge; the Guildhall and the Hall of Trinity College, are in perfect unison; nobody mistakes the object,—no one speaks of it,—the aim is Africa. The key giving possession to Central Africa, and of all the continent, has been discovered, and is now in the possession of England. Political agents, under the form of missionaries, merchants, travellers, boers, captains of dragoons, etc., are marching forward to enter on possession. The commercial man, at war with all nations, is there; the soldier is at hand, but kept out of view. On this continent the two great leading European nations now display the essential differences of their race; the *sabreur*—who fights not to enrich his nation but himself—against the bale of cotton and the man of peace,—aggressive, fierce; not warlike, but obstinate and courageous in the defence of what he considers his right. These two races fought the same battle in America, and are about to try it once more in Africa. In the meantime, this new crusade against the heathen,—the black man, the Fetiche worshipper, the accursed of Ham, the descendant of the Canaanites, and who, strange to say, were not Negroes, as they ought to have been,—thrives, and is popular with all classes. It promises new sources of trade, and profitable investment for several influential classes,—the military class, the priestly class, the ruling class, the commercial class.” (Pp. 555, 558.)

Well may Knox write: “I do not find in the history of the conquests of the ancient Greeks and Romans that peculiar savagery, ferocity, hypocrisy, and licentiousness which mark the progress of modern Christian races and nations over the earth”: of “the actuality of the contest which renders the African continent so interesting”: of “its present relation to the European brigands of the present day”: and that “the aim of all the fair races is the same, namely, plunder and conquest.”

“What the most Christian people in the world,—indeed, according to their own belief, the only true Christians on earth,—what this wonderful people did in America and India, they must repeat in Africa, which they now invade at all points. A new crusade has been formed, the banners of which are the Cross surmounting a bale of cotton. Oxford and Manchester combine to push forward the good work, which, aided by the Armstrong gun, cannot fail to reduce Africa to the condition we now so much admire in the United States of America, Australia, India, etc., the native races exterminated, or ground to the earth, in the most abject condition humanity can assume.”

Looking at the atrocities perpetrated by Europeans in general, of our race in particular, in every part of the world, we cannot doubt that we, the most filibustering nation on the globe, are strongly

leavened with the Scandinavian piratical element. Those savage ancestors of ours were at least sincere. They never pretended to be anything else but robbers seeking to establish themselves. They never gave out that their object was to spread religion and civilisation ; But we, while we create a desert, call it peace. We, whose attempts at colonisation bring ruin, degradation, slavery, and extinction on the natives, boast, with brazen effrontery, of our mission to evangelise the heathen ! Can hypocrisy go further ? Surely, the Philistine and Pharisee of Syria were but undeveloped creatures compared to the British Philistine and Pharisee ! Having propagated beyond the means of living comfortably in our own islands, we emigrate to foreign lands, not for our own benefit, but solely to Christianise and civilise the heathen ! Despising the dark races, classifying them, one and all, under one category,—that of “niggers,”—we inflict upon the unfortunate savage our civilisation and the religion of peace, exemplified by our iron-clads, cannon, soldiers, sailors, bibles, rum, missionaries, and land-jobbers. How wonderful that these simple-minded Africans, Australians, New Zealanders, and American aborigines do not love us ! De Tocqueville says (p. 422),—

“The Spaniards pursued the Indians with bloodhounds, like wild beasts. They sacked the New World with no more temper or compassion than a city taken by storm ; but destruction must cease, and frenzy be stayed. The Spaniards were unable to exterminate the Indian race by those unparalleled atrocities, which brand them with indelible shame, nor did they even succeed in wholly depriving it of its rights ; but the Americans of the United States have accomplished this twofold purpose with singular felicity,—tranquilly, legally, philanthropically,—without shedding blood, and without violating a single great principle of morality in the eyes of the world. It is impossible to destroy men with more respect for the laws of humanity.”

We have seen, at the Anthropological Society, a painting representing the last inhabitants of Van Diemen's Land, left alive by the British Christian filibuster ;—men, women, and children, cowering round their fire,—in all, *thirteen persons* ! all that are left to represent the results of Saxon civilisation on the native ! Of these, some say *two* are living ; others say *not one* ! Knox writes :—“The Anglo-Saxon has already cleared out Tasmania. It was a cruel, cold-blooded, heartless deed. Australia is too large to attempt the same plan there ! but by shooting the natives as freely as we do crows in other countries, the population must become thin and scarce in time.”* (P. 144.)

* “Could he be taught,—could he read and understand the rise and progress of the Anglo-Saxon in America, then war to the knife would be the first and last words of a Chinaman, a Kaffre, a Red Indian, a New Zealander.”

And this is the system of colonisation over which we are requested to sing a pæan under penalty of forfeiting the good opinion of the British Philistine, the Saxon saint, who is shocked with anthropologists for throwing doubts on the time-honoured legend that all men have descended from Adam. Providence, it is contended, evidently meant us to be instrumental in bringing the blessings of religion and civilisation to these benighted races; those who have been and those who are now being more or less rapidly exterminated by our friendly embrace. From a temporal point of view, these savage tribes would certainly have been more fortunate, had they never seen a Bible; been killed by our fire-water; shot down by our rifles, or demoralised and debauched by our rum-dealers and convicts—the scum of our civilisation. Whether we have saved their souls is problematical; but there can be no matter of doubt we have not saved their bodies! Their bones bleach in their native forests. There are few or none left to haunt the graves of their fathers. Where the painted savage roved a free man, a picturesque object in harmony with the romantic aspect of nature; where, in obedience to his religious instinct, he worshipped the Great Spirit, and mused over the happy hunting grounds—

“Saw God in clouds and heard him in the wind,”

an alien race now intrudes: there Christians raise their rival chapels, and the white man, after cheating his neighbour by the use of false weights for six days, on the seventh sings psalms to the God of Jacob. But missionaries write home that the savage perishes singing Dr. Watts's hymns—not raving and cursing the pale-faces, their religion, and their fire-water. The undeniable fact that wherever Europeans settle, there the native races decay and become extinct, is piously attributed to the inscrutable designs of Providence! Old women of both sexes in Britain are persuaded that the good work prospers. Old and young subscribe,—even charity children give pence—to further the conversion and civilisation of the benighted heathen. England looks forward to the day when the world will be all Christian—that is, colonised solely by the white races—covered with cabbages and Anglo-Saxons.* A worthy old clergyman once expressed to us, in perfect good faith, his joyful conviction that we were very rapidly converting all the heathen: which put into the language of fact, means that by the aid of our fleets, armies, and our superior civilisation

* “How speedily does the Anglo-Saxon show his real character when relieved from the pressure of the Three Estates. In America, he will not allow a black man to be a free man; in Australia, he deems him entirely below his notice; in Tasmania, he swept him, and at once, entirely from the land of his birth. No compunctious visitings about the ‘fell swoop’ which extinguished a race.” P. 280.

(chiefly illustrated in the art of manufacturing deadly weapons of destruction—Armstrong guns, rifles, iron-clads, and other infernal machines), our fire-water and our enterprising colonists, we are planting our own race in the devastated homes of the aborigines. Yes, with all our greatness in arts, science, and literature, it cannot be denied the old Saxon piratical feeling is in us still. Just as the Norway rat has exterminated the British black rat, so do the modern semi-civilised Northmen sail round the globe, invading all lands where the inhabitants are too weak or too simple to repulse them, leaving to the natives a legacy of death and desolation. As to the name of the race which chiefly deserves the honour of these chivalrous deeds—whether Celtic, Saxon, Norwegian, Danish, or any other—let anthropologists settle that interesting fact if they can. It is the work of the British Philistine, of the Arabs of the Ocean, the marine Ishmaelites whose boast it is to teach the nations how to live.

And how long is this to endure? The views of Knox permit us to indulge a gleam of hope for the dark races. "All this endures for a time. At last nature resumes her course, and the intrusive race disappears."* Are our sympathies to be altogether with the oppressors? Is it wicked to indulge the unpatriotic hope that nature may not intend the dark races to be altogether swept off the face of the earth? Knox distinctly holds that "No race is equal to the colonisation of the whole earth. They cannot extend themselves from one continent to another. Already the Anglo-Saxon rears with difficulty his offspring in Australia; it is the same in most parts of America. But for the supplies they receive from Europe the race would perish, even in the most healthy climates." "A *real native* permanent American or Australian race of pure Saxon blood is a dream which can never be realised." "Nature disclaims the deception, and says to them:—'You brought with you from Europe all the characters of race—some Celtic, some Saxon, some Scandinavian, some German or Teuton—as such, go where you will, you must ever remain part of the race to which you originally belonged. You are an intrusive race or races, you and your oxen, horses and sheep. By avoiding all intermarriage with the aboriginal races of the soil, and with the black race imported from Africa, you may for a time escape the annihilation of your races; but ahead of you stands the grand difficulty—climate, and an uncongenial soil—certain in time to exhaust the vitality of your race, as it has ever done with all the intrusive. This is one of the checks nature adopts to preserve her species of living forms, against the universality of one form of life; against man himself, for inasmuch as brigandage, or a desire to plunder other nations and races, to rob

* "A limit, then, seems set to the aggressions of the fair races."

them of their territories, and to reduce them to a sort of bondage or slavery, is the great aim of all the nations and races of men, so, long ere this, one strong-handed, unscrupulous, intellectual race, led by men of genius, a Cæsar, an Alexander, a Napoleon, would have overspread and peopled the earth."

Thus the inexorable laws of inscrutable nature may act not altogether unlike what is called poetical justice. It may be decreed that the dark races are not to be altogether "wiped out" by the unscrupulous fair races. The ruins of European settlements in America, Asia, Africa, Australia, may yet serve to point the moral of civilised rapacity, and to teach wiser generations of the future that each race has its continental area, within which it flourishes, beyond which it decays. The Saxon Christian pirate may be no more successful in extending his race than were his heathen ancestors. The Anglo-Saxon, the enterprising democrat, and practical emigrant, who thinks only of to-day, who firmly believes that he can thrive anywhere, who laughs at the idea that climate can control his insatiable lust of conquest, or curb his wandering propensities, who vaunts that the world was made for him; may yet learn that bull-dog courage, and indefatigable perseverance can do much, but cannot bid defiance to the laws of nature. He cannot colonise India and Central Africa, and as for our flourishing colonies, now fed by perpetual streams of emigration from the mother country, let the successive civilisations in Northern Africa, of Phœnician, Roman, Greek, Vandal, Saracen, and Turk, which all tried and failed to supplant the primitive races—the Moors and others (who were there before Queen Dido, and are there now)—suggest to him that after all, the indigenous races may have some right to the possession of the soil on which each was originally placed.

We perceive clearly that each race has some special merit or advantage, adapting it to the soil and climate to which it is indigenous; rendering it on its own native ground superior to alien races. Place the "greatest of modern philosophers," Mr. John Stuart Mill, or Mr. Carlyle, or Mr. Bright, on the coast of Guinea, and in that land neither of those eminent men will be superior to, or even equal to, in many respects, the Negro. The black man will live within the tropic where the white man would die. The Saxon may be taught some day that the attempt to people the whole globe with his race is a blunder as well as a crime. Nature appears not to have intended one race to monopolise the world. If such should be her intention in the future, possibly Saxons may err in supposing that *they* are the chosen people; the saints who are to inherit the earth. More warlike and more intellectual, and possibly, even more moral and religious races

have tried and failed in the attempt to possess the world. The Saxon is a magnificent portly being in his own islands, especially at a vestry meeting ; but a tropical climate does not respect his rotundity. Possibly, then, he may learn that charity begins at home, and confine himself to posing as a model of moral deportment within humid England. We are not fond of speculating on the designs of Nature, of which every human being is profoundly ignorant (though we suspect that the theologian had better turn over prophecy respecting man's future to the scientific anthropologist), but we respectfully suggest that the difficulty each wandering race finds in supporting and maintaining itself in a foreign climate, is a hint that we might be better employed in restraining our population within our natural area, and bringing our ignorant and semi-civilised masses up to some common standard of comfort and cultivation, instead of destroying "*niggers*" abroad. We wonder if any man of pure Saxon blood understands the esoteric meaning of *Gulliver's Travels*? The King of Brobdingnag wondered to hear Gulliver "talk of such chargeable and expensive wars, that certainly we must be a very quarrelsome people, or live among very bad neighbours, and that our generals must needs be richer than our kings." He asked "what business we had out of our own islands, unless upon the score of trade or treaty, or to defend the coasts with our fleet." We may err in thinking that the Saxon (defined by Knox as : "of all others the most outrageously boasting, arrogant, self-sufficient beyond endurance, holding in utter contempt all other races and all other men") is not destined to colonise the globe. The idea is unpatriotic, unpopular. Some very eminent authorities think that the earth will be peopled by Europeans forming a homogeneous white race.* But if the white races are to proceed in their work of practically destroying the dark races ; of actually cutting off, and annihilating whole races of men ; subjugating and demoralising others, whose misfortune is that they are developing their respective forms of civilisation at a slower rate, and on a different plan from us, the mushrooms of humanity ; then, if religion, morality, honour, truth, be not mere words ; if there be such things in Europe, let us openly and candidly confess that our mission, and that of the white races generally, in relation to the dark races, is that of the Destroying Angel ! Away with subterfuge, cant, and falsehood ! Does the Saxon butcher pretend to love the calf which he tortures by bleeding for days before killing it ? He leaves that hypocrisy to the church-going lady, who is very particular about getting white veal ! Does the wolf weep over the lamb before

* See Mr. Wallace "On Natural Selection applied to Anthropology," *Anthropological Review*, Jan. 1867.

rending it? While civilising the dark races off the face of the earth, let us in the name of common decency, leave off talking about their souls, and canting about the universal brotherhood of man! The mockery is too ghastly. Let us either cease usurping and annexing territory along with millions of slaves, to which and to whom we have no moral right whatever, or cease adding insult to injury. If we imitate the conduct of a burglar, by breaking into our dark brother's house and robbing him of his goods, let us at least cease to pose in the attitude of a saint. If we preach—preach. If we flog—flog. But do not preach and flog together. Why the mockery of buying the territory which we compel the dark races to sell us? Why the sermon on the mount accompanied with Armstrong guns and iron-clads? Would it not be more decent to keep the Bible out of sight, while handing the brandy-bottle to our dark brother; while driving a brisk trade in rum, to drop the subject of religion, at least until our missionary and civilising work has been done as effectually as in Tasmania? Our system of colonisation is simply war, carried on under a flag of truce. Let it be open war. While obeying the animal propensities—combativeness, destructiveness, acquisitiveness—let us no longer profess to gratify the higher organs of benevolence, veneration, conscientiousness. Strip off the pharisaic mantle of philanthropy, religion, and duty. Let the Anglo-Saxon filibuster stand uncovered in all his beauty, “when unadorned adorned the most.” Let him see himself as others see him—ruthlessly at war with every living organism, plant, animal, and man, which he cannot utilise for his own special benefit; enslaving some races, destroying others, stamping out, in his blind selfish fury, “the image of God carved in ebony,” taking far more care to preserve the skins of lions and tigers than the skins of human races, which he has annihilated, and believing that after his earthly “mission” has been accomplished, he, the most religious of men, will be rewarded with a crown of glory; true descendant of the old Scandinavian pirates, who believed in a perpetual recurrence of fighting and carousing in Walhalla. The great French satirist, Voltaire, was not far wrong when he defined men as “insects devouring one another on a little atom of mud.”

Our limits compel us to conclude our view of the Saxon race, gleaned from a work more suggestive, comprehensive, and interesting, than any other of a similar compass. That this great practical anthropologist, who brings the science of man down out of the clouds (to its intimate relations with humanity in religion, politics, government, national conduct, and every department of human action), should by many be misunderstood and disliked, is extremely natural. He has got a knack of telling unpleasant truths in very plain language. He forgets

to flatter priests, kings, statesmen, aristocracies, national prejudices. His style is remarkably caustic, trenchant, epigrammatic. It requires thought and preparatory study to gather and digest his meaning. If Mr. Carlyle be right in thinking most people fools, it will be some time before Knox be as popular as Mrs. Beecher Stowe. The large and noble army of "*trimmers*" think Knox altogether too plain-spoken for a man of science. A beautiful thing science would be if left in their hands ; discussing vital questions with the fear of Mrs. Grundy before their eyes ! They would cabin, crib, confine anthropology, and sink it to the level of popular theology, making it a thing of compromise, a mere slavish tool of a dynasty, a priesthood, a government, a nation, a corporation. Their censure is the highest praise. We conclude by stating, in the words of Knox, why his book will excite strenuous opposition :

"It runs counter to nearly all the chronicles of events called histories ; it overturns the theories of statesmen, of theologians, of philanthropists of all shades—from the dreamy essayist, whose remedy for every ill that flesh is heir to, is summed up in 'the coming man' to the 'whitened sepulchres of England ;' the hard-handed, spatula-fingered Saxon utilitarian, whose best plea for religion and sound morals and philanthropy, 'is the profitableness thereof'—impostors all ! To such the truths in this little work must ever be most unpalatable. The inordinate self-esteem of the Saxon will be shocked, nor will he listen with composure to a theory which tells him, proves to him, that his race cannot domineer over the earth—cannot even exist permanently on any continent to which he is not indigenous—cannot ever become native, true-born Americans—cannot hold in permanency any portion of any continent but the one on which he first originated. Physiologists will dispute with me the great law I have endeavoured to substitute for the effete common-place of the schools ; geologists will think me hasty in declaring the era of Cuvier at an end ; theologians—but here I stop ; a reply shall not be wanting. As to the hack compilers, they will first deny the doctrine to be true ; when this becomes clearly untenable they will deny that it is new, and they will finish by engrossing the whole in their next compilations, omitting carefully the name of the author."

THE BRAIN OF A NEGRO OF GUINEA.*

THIS is a careful description, by a well-instructed and very eminent anatomist, of the brain of a male Negro from Guinea, illustrated by a series of eight fine lithographic plates, bearing every appearance of

* *Cervello di un Negro della Guinea, illustrato con otto tavole litografiche*, dal Prof. Cav. Luigi Calori. Bologna: 1866, quarto.

accuracy ; for which the author needed not to have made any apology, as the Negro brain has not yet received a tithe of the illustration it demands.*

The meninges did not present any lines or speckles of black, nor did the arachnoid appear of a brown tint. The encephalon was of an elongate narrow form : the author speaks of it as narrow and long, considers its length as more apparent by reason of the narrowness, and not peculiar to it, but to be observed not unfrequently in European brains. We believe that, speaking in general, length and narrowness may be said to be peculiar to Negro skulls and brains ; length, narrowness, and lowness, to be equally peculiar to the skulls and brains of Australians.

The weight of the encephalon of this male Negro, when despoiled of its membranes, is stated by Professor Calori to have been 1,260 grammes. This may be compared with the weights of other Negro brains, deduced by the process of gauging their skulls. The rules to be observed in applying this process are described in a *Memoir* read before the Royal Society.† In twelve male Negroes of *unknown tribes* the average weight was found to be 1,255 grammes ; in a male Fantee, 1,179 grammes ; in three male Ashantees, 1,216 grammes ; in nine male Dahomans, 1,322 grammes ; in a male Akassa, 1,249 grammes, so that we are justified in concluding that Sig. Calori's Negro's brain was of fair average size for the race. The mean brain weight obtained from twenty-one English skulls of men was 1,425 grammes, that is, 165 grammes more than Professor Calori's Negro.

In referring to the author's *résumé* of the results of his observations, he says, the weight of the Negro brain is greater than that of the ordinary European woman, and holds a middle place in the weights of brains of ordinary European men. (Without disputing the correctness of the author's position, it should be remarked, that we have already seen that the average weight of the brain in European men considerably exceeds that of male Negroes.) The grey substance appears to be darker than in the European ; in this Negro, from the greater abundance of the cerebral cells containing granules of pigment, which seemed to be derived from venous injection and the greater blackness of the blood. Concerning the latter, the author says, all doubt is not yet removed, whether it may be native or an effect of disease, specially of the respiratory organs, or of climate. Professor Calori testifies to the fact. The stratum of grey substance covering the cerebral convolutions is of a like thickness to that seen in Europeans. So also

* Professor Luigi Calori is the author of *A Complete Atlas of Human Anatomy*.

† *Proceedings of the Royal Society*, 1868, vol. xvi, No. 98, p. 236.

do the colour and consistence of the white substance seem to be the same. The cerebral convolutions, although they may be more simple, that is, a little more broad, less incised, less frequently folded, and separated by sulci somewhat less profound, exhibit, notwithstanding, much complication. Here again the author shows his devotion to truth. He testifies to the fact of the less complication in every respect of the convolutions of the Negro hemispheres to those of Europeans. None of those who have considered that they have seen a very decided difference between the two have said more. From the direction of the fissure of Sylvius and that of Rolando we are not able to deduce differences sufficient to distinguish the brain of the Negro from that of an European. The cerebral convolutions are collected into an equal number of lobes, as in Europeans; the frontal being distinguished by being long, narrow, and low, and the temporo-sphenoidal by being in proportion in the brain of our Negro a little higher, but less broad. Of all the cerebral convolutions, those of the frontal lobes present a notable difference, supposing that it is generally true that in the European the middle order, or stratum, of the frontal convolutions is confounded with the superior stratum, or more strictly with the superior external frontal convolution, and the inferior stratum remains always free and, as it were, independent. In our Negro, the inferior is confused with the middle stratum, as in the brain of the Hottentot Venus; but the middle stratum is not, as in this, separated, but is suddenly confounded with the external superior frontal convolution, not otherwise than as in the European; the internal superior convolution, or that of the edge of the hemispheres, alone remaining free or independent. The weights being equal, the extension of the superficies of the cerebral convolutions of our Negro is something less than that of the convolutions of the brain of an ordinary European man. Speaking proportionately of the extension of the superficies of the cerebral convolutions, that of the convolutions of the frontal lobes of our Negro is greater than that of the frontal lobes of an ordinary European man, which constitutes a true compensation in favour of the frontal lobes of this Negro. Looking to this compensation and the weight of the brain, it seems that the brain of our Negro ought not to be confounded with that of the European woman, but should hold an intermediate position between that and the European man, or man of our race. In the other parts of the encephalon, excepting the superior vermiform process of the cerebellum, there are no characters which truly distinguish the brain of the Negro from that of the European. Lastly, the cerebral nerves cannot be said in our Negro to be larger with respect to the weight of the brain, but are in a manner proportionate; without we except the

sympathetic, the glosso-pharyngeal, and the vagus, which are a little smaller, and the accessory nerve of Willis, which is somewhat more voluminous. (This agrees pretty much with the observations of Tiedemann.)

Every true anthropologist must feel grateful to Professor Calori for his elaborate description, which we have not been able to go into in that special manner it deserves, and for the fine series of illustrations of the brain of a Guinea Negro. These illustrations embrace a vertical view of the encephalon (Tav. I), a profile view of the same (Tav. II), an anterior view of the same (Tav. III), a posterior view of the same (Tav. IV). The last two views are very uncommon in anatomical plates. A base view of the encephalon (Tav. V), a base view of the cerebrum (Tav. VI), a view of the encephalon, exhibiting the inside of one hemisphere, and a perpendicular section through the middle of the corpus callosum, cerebellum, etc. (Tav. VII); a horizontal section of the left hemisphere opening the lateral ventricle (fig. 8); the cerebellum seen on its upper surface (fig. 9); the same seen on the left side (fig. 10); and the cerebral nerves seen at their origins (fig. 11, Tav. VIII). The whole of these beautiful plates, which exhibit the Negro brain in a manner much superior to and more complete than any that have preceded them, are executed in a good style of lithography, of the full size of nature, so as to constitute a very valuable contribution to anthropological anatomy.

In this work, as we have already hinted, the author has never lost sight of his fealty to truth. He has faithfully described what he has seen. At the same time it is apparent throughout that he is wishful to mark every item wherein his Negro's brain agreed with that of Europeans, and to explain away, in a deprecatory manner, every item in which it differed. The tone of his mind is fully manifested in the concluding paragraph of his memoir, to which we will recur immediately.

It ought not to be supposed that anatomists are fully acquainted with the differences which distinguish the origination and conformation of the brain of the Negro. A comparative knowledge of such a complex organ is not to be acquired and made perfect at the first essay; and it is most consonant with true philosophy to acknowledge that at present very little is conclusively demonstrated on the subject. We must, therefore, welcome heartily every sound contribution like that of Signor Calori. It is easy to point out the errors into which Tiedemann and others have fallen, who have entered upon the investigation of the Negro's brain under the influence of *a priori* notions. However amiable, however pardonable have been the motives that have animated them, there is no denying that such efforts are not worthy

of confidence ; that they are really more fitted to be suspected than to be trusted. The world may not look upon such obscure, difficult, and recondite problems as of that worth and importance to be fit to interrupt the ordinary course of events. Yet such inquiries lie at the foundation of all our knowledge of human races, and ought to form the real, although remote, basis of all legislation and government. Up to the present moment it may be safely affirmed that the entire attainments of legislators and rulers on anthropology are to be regarded as a mere bundle of prejudices. These persons have undertaken to rule mankind, but have omitted to learn what is the organisation, what are the functions and the faculties of man, and how these essentially and totally differ in the different races of man—i.e., the alphabet of anthropology. In spite of all the teachings of all ages, they have, without any adequate inquiry, as it were, simplified the subject ; have assumed the position that mankind are all one and the same, one in organisation, one in faculties, one in capabilities ; in fact, that by *education* and *development* all the various races of man may become equal. The history of every human race in every age proves the utter untruthfulness of this position by giving relief to the peculiarities of each. To look upon the history of mankind in the present century is in reality to look upon the demonstration of the absolute falsity of such a position, written in characters of light in every accessible region of the globe. Yet the delusion of development goes on, dragging all its horrific consequences in its train without interruption, without a pause. The late sanguinary events across the Atlantic, which, according to the reports of recent travellers, have already resulted in consigning more than a quarter of the four millions of Negroes to destruction (all in the name of humanity too !), are totally unheeded by the believers in amelioration and equality—the most cruel and delusive doctrines that ever found advocates, however they may be coloured by the motives influencing their advocates. The readers of the *Anthropological Review* can scarcely have forgotten the withering demonstration of the futility of the notions of a philosophical and enlightened legislator, who weakly regards education as sufficient to raise all mankind to the same high level.* Still the unfounded delusion is not at all arrested, but goes on and flourishes. This legislator entertains a hope that the perennial grievances of Ireland may be eradicated by his panacea. Regarding him as a philosopher and capable of learning some of the teachings of anthropology, could his prepossessions be overcome, the best wish we have for him is that he should go to school again, should search out the multitudes of Irish who are now to be found in all our large towns,

* *Anthrop. Review*, vol. iv, No. xiii, April, 1866, p. 113, "Race in Legislation and Political Economy."

and are to be studied there by any one who is not too squeamish to descend into the dirtiest, most obscure and miserable precincts of these towns, where filth, squalor, stench, disorder of every kind abound, and where something true, but neither complimentary, nor, indeed, hopeful, may be learned of the Irish. It may at least be learned that where they are *en masse* the Irish are unchangeable, and that it is useless to hope for their improvement, except by that objectionable mode which got the name of miscegenation in the United States of late—i.e., of real degeneration of the higher race.

Our author, in his concluding paragraph, with creditable reserve, says that, if the propositions he has deduced from the Negro's brain should, by further observation, be acknowledged not to differ from the truth, he believes that the picture of the Negro drawn by Virey and others will have much to be modified. Professor Calori has produced a good contribution towards the solution of the problem of the peculiarities of the organisation of the brain of the Negro. Much, very much, more must be done before we can undertake to say how these peculiarities tend to produce those characteristics, which mark and always have marked his distinguishing grade among human races. Every temperate and instructed mind must be convinced of the defects in his character when compared with Europeans, and see that both spontaneous and exotic influences have utterly failed to bring about any important development which can overcome them. All experience tends to the same result. This is a strong presumptive argument that diversities of organisation exist, whether demonstrable or not.

We have taken some pains to compare the figures of Signor Calori's Negro brain with those of European brains, produced by the most accurate observers; we especially refer to those of Gratiolet and Rudolph Wagner, to which may be added unpublished lithographs of Professor Sebastian, of Groningen. In size and form the European and Negro brains are at once seen to be different. The frontal lobes of the latter are, it seems to us, less. The convolutions are decidedly more simple, less complicated, as it were, less elaborated; in which characters they agree much more closely with the figure of the brain of the Hottentot Venus, given by Tiedemann and repeated by Gratiolet, and with the accurate figures of the brain of the Bushwoman, contained in Professor John Marshall's Memoir in the *Philosophical Transactions*.* If we do not err, the brains of the Bushwomen of Tiedemann, Gratiolet and Marshall stand lowest as to the simplicity of their convolutions; the brains of the Negroes of Tiedemann (Honoré), Sebastian and Calori come next in degree of complexity; and the brains of Europeans, de-

* "On the Brain of a Bushwoman," and "On the Brains of two Idiots of European descent," *Phil. Trans.*, 1864, p. 501.

lineated by Gratiolet* and Rudolph Wagner, are distinguished by a richness of complexity in their convolutions (especially those of Gauss—a very distinguished mathematician and astronomer—Dirichlet, and Hermann) quite unknown to the others. There are certainly degrees even in these. The brains of women, of which figures are given by Huschke† and Rudolph Wagner,‡ come much nearer in point of simplicity of convolutions to the Negroes' brains than those of the men. And the brain of the Naturalist, aged seventy, depicted by Wagner, is marked by much greater simplicity of convolutions than those of Gauss and the others already named, which have been so carefully and very beautifully delineated in Rudolph Wagner's work.§ It may be noticed that Professor Marshall states that simplicity in the convolutions of the brain is a mark of "structural inferiority," and that a want of symmetry in the convolutions of the two hemispheres of the brain,|| which is perceived in Professor Calori's Negro, is a "human character."

J. B. D.

* *Mémoire sur les plis cérébraux de l'homme, etc.*, folio.

† Schædel, *Hirn und Seele*, 1854, folio.

‡ *Ueber den Hirnbau der Mikrocephalen*, u.s.w., 1862, quarto.

§ *Ueber die typischen Verschiedenheiten der Windungen der Hemisphären*, u.s.w., 1860. *Sechs Kupfertafeln*.

|| Notwithstanding, the complexity of the problem of an estimate of the cerebral power of any given individual or race, from an examination of the brain, may be better perceived after reading the following passage from the work of an able anatomist, which has come into our hands since what precedes was written:—"In estimating the comparative value of the convolutions in different individuals, not only should we look at the number of gyri seen on a surface examination; but the depth of the sulci, the thickness of the grey matter, and the quality of the tissue composing the convolutions, ought to be considered. A brain with deep sulci, conjoined with a thick layer of grey substance, but with comparatively simple gyri, might present as great an extent of grey matter as one, the convolutions of which are much more tortuous, though less deep. That grey matter is presumably the most active which contains the greatest number of nerve-cells in a given area; but what the comparative quantity of nerve-cells may be in a given extent of convolutions from corresponding parts of the brain, in individuals of different sexes, or of different races, or even in convolutions taken from different parts of the brain of the same individual, we have at present no definite information. Structurally, therefore, one may say, that cerebrum presents the most complex organisation in which, with a large proportion of nerve-cells in its grey matter, the foldings of the surface are complex, the sulci are numerous and deep, and the grey substance possesses relatively considerable thickness" (p. 26).—*The Convolutions of the Human Cerebrum Topographically Considered*. By Wm. Turner, M.B.: 1866.

THE IRAN AND TURAN.*

THE Turanian is the impersonation of material power. He is the merely muscular man at his maximum of collective development. He is not inherently a savage, but he is radically a barbarian. He does not live from hand to mouth, like a beast, but neither has he in full measure the moral and intellectual endowments of the true man. He can labour and he can accumulate, but he cannot think and aspire like a Caucasian. Of the two grand elements of superior human life, he is more deficient in the sentiments than the faculties. And of the latter, he is better provided with those which conduce to the acquisition of knowledge than the origination of ideas. As already remarked, he is the child of humanity, and we may observe just now sadly in want of some additional schooling. The cerebral physiologist has no difficulty in assigning the causes of these deficiencies, in detecting the sources of these limitations. The brain, though large in volume, is coarse in texture. It has quantity but not quality. The cranium is wanting in coronal development. The entire contour and expression of the face is unmistakably indicative of imperfection in the cerebral convolutions, a conclusion sustained also by the form and carriage of the body. The temperament is low, being at the best fibrous, but generally inclining to the lymphatic. The Turanian is man arrested before reaching the Caucasian stage of development; in other words, he is simply the embryonic form of the Iranian. Of his superior antiquity, therefore, there can be no doubt, and as little of his inferiority in the grade both of moral and material being; but he is capable of attaining to civilisation. Of this, we have ample evidence, both in the past and the present, and the only question is, was this civilisation aboriginal or imported? We incline to the former, not, however, ignoring the assistance received, and the elements assimilated from Iran, during the comparatively later ages of Caucasian greatness. Of these assimilations, that of Buddhism is the greatest, and in every way the most important, of which history bears record. It is the grandest known instance of the transference of faith from one distinctly marked race (the Caucasian) to another, so differently characterised as the Turanian. Christianity presenting us only with the phenomenon on that smaller scale, implied in the diffusion of a very modified Semitic creed among nations, mostly of Aryan lineage. The transference and diffusion of both these faiths,

* Continued from p. 137, No. 21.

or rather of this ampler form of the one incarnational faith, over such an extensive area, is, however, a fact deserving of far more attention from the anthropologist than it has yet received. European thinkers being themselves involved in the movement, have failed to recognise either its extent or importance, as a racial phenomenon ; their entire education and all their traditional habitudes of thought and belief, inclining them to regard it rather under its purely theological than its profounder ethnic aspect. We should, however, endeavour to rise above this narrowness, and bidding adieu to the little prejudices and misconceptions originating in the specialities of our own particular religion, race, and geographical position, attempt the solution of this great problem from the true humanitarian standpoint, whence races are regarded without favour or affection, and creeds, like codes, languages, and philosophies, are esteemed but as the normal product of a certain type of character, itself the effect of a peculiar mental constitution, originating in the organic structure of some distinctly marked family of man.

To fully understand this phenomenon, we must go back to the state of the world previous to its advent, and so mount to the causes which produced, and the opportunities which favoured it. And, firstly, let us endeavour to define its own essential character, as we shall thus be the better enabled to estimate its true vocation in the world. Buddhism and Christianity, then, are essentially negative forms of faith, the product of that great age of analysis and disintegration, which has eventuated socially, in the destruction of the ancient hereditary hierarchies, and in the general dislocation of all the subordinate castes, and intellectually, in the dethronement of *à priori* principles and the enthronement of *à posteriori* facts ; language as the appropriate instrumentality for the expression of ideas being simultaneously broken down, from the sublime inflectional grandeur of Latin and Greek, Zend and Sanscrit, into the petty particles which constitute the modern element of English, French, Italian, Persian, and Bengalee. Such a movement was rendered unavoidable by the law of reaction. Edification, social and intellectual, had proceeded to the extent of producing a despotic authority, which resisted progress, and stifled all young life by the oppressive weight of defunct forms, that limited action and repressed thought. Ancient helps had become fossilised into modern hinderances. The system was everything ; the man was nothing. It was a dead past strangling a living present. This was the condition of things in ancient Egypt, Palestine, Chaldea and India, at the dawn of authentic history. Against this process of gradual and otherwise hopeless fossilisation, it was absolutely necessary that humanity, through some of its members at least, should

enter its practical protest, which, theologically, took the form of Buddhism in India and Christianity in Palestine, while, politically, it meant Tartar conquest and Gothic invasion. We now then not only begin to understand the fundamentally democratic and even communistic character of these faiths, but why, in their almost mundane diffusion, they synchronised with the military triumph of the lower muscular over the higher nervous races.

These we know are very unpleasant truths, not only to "the religious world," but also the radical party; but what, as we have said, if these schools be founded on that phase of error, which originates in the overstatement and exaggeration of truth. What if we tell them that as a sect and party they are not new, but, on the contrary, represent a mundane movement, now nearly exhausted, and rapidly approaching its inevitable termination—a reaction towards order and authority, confusion ending in reedification, chaos ultimating in creation—according to the Providential laws of this divinely constituted universe!

We have spoken of Buddhism and Christianity as branches of the same tree, parts of the same great movement towards the analysis and disintegration of an effete past. We have shown that they originated in similar wants, and were accompanied by corresponding ethnic commotions; but we have as yet by no means exhausted their parallelism. Both are based on that peculiar form of Pantheism, which culminates in an incarnational advent, "God manifest in the flesh." Both in their necessity, even as negative faiths, for some kind of ecclesiastical organisation, developed a celibate hierarchy, that is a sacerdotal aristocracy, constantly recruited from the democratic laity. Both are opposed in spirit, to the claims of birth and the privileges of wealth, and each lauds in almost identical terms, the advantages of poverty and the merits of humility. A broken heart and a contrite spirit are alike the objects of highest aspiration to the devotees of either—spiritual self-renunciation being combined, in each, with the stoutest social assertion of a vigorous individualism—the hoped-for absorption into *one* being for eternity, the division into *many*, for time. Both commend beneficence—a division of goods among the poor; theoretically, to the extent of communism, practically, to the point of adequately endowing certain well appointed abbeys and lamissaries, or otherwise contributing to the maintenance of God's poor, the religious orders, whose especial vocation it is to despise this world, and live only for the next. Both profess peace on earth and goodwill towards men, and each has been accompanied and followed by some of the most stupendous wars, invasions, and conquests, of which the records of either Europe or Asia make mention. To speak after this of such

minor features as similarity of vesture and organisation among their monastic orders, or identity of ritual in the ministrations of their celebrant clergy, to dwell in the words of M. Huc, on "the cross, the mitre, the dalmatique, the double choir, the psalmody, the exorcisms, the incense box, the benediction, the worship of saints, the fasts, processions, litanies, and holy water," would be altogether superfluous—such additional proofs would never be seen or appreciated by some people—and they certainly are not wanted by others. To conclude this strange parallel in doctrine, ceremonial and fortune, as Buddhism originated in India, whence it has since been expelled, so Christianity was promulgated in Palestine, where, however, it is now almost unknown, and as the Hindoos have returned to Brahmanism, so the Jews are universally monotheists—facts of correlation scarcely explicable by mere coincidence, and indicative of some underlying element, common to both these sublime forms of incarnational Pantheism.

We have hitherto contemplated this subject almost wholly from the historical standpoint, let us now enter somewhat more profoundly into its ethnic bearings, where we shall probably find some points of difference as well as of resemblance, between Buddhism and Christianity; and, in the first place, it may be remarked that the former originated in an Aryan and the latter in a Semitic area, while the first is now almost wholly Turanian in its site, while the second is still predominantly Caucasian. These facts are sufficiently indicative of the superiority of Christianity to its Eastern relative and rival, in accordance with the admitted Ethnic superiority of its apostles and converts; but they are not adequate to prove its radical diversity. And yet this fundamental identity of forms of faith, so widely separated geographically, and at present entertained by races so distinct in type as the Western Aryans and Eastern Turanians, is suggestive of strange reflections. By what necessity were the Turanians compelled to so extensively adopt a Caucasian creed? And conversely, by what influence were the eminently monotheistic Semites prepared to become the founders and apostles of a tritheistic and incarnational faith like Christianity, so feebly Semitic in its formal doctrine, and so thoroughly Aryan in its profounder spirit and its more popular legends? Had the Turanians outgrown their former lessons, and so felt their need of a renewal of Aryan influence? And must not Palestine have been largely suffused with Aryan blood ere it could have become the theatre of such a theological revolution as is implied in the origination and early propagation of the faith of the cross, to which the subsequent testimony of eighteen centuries shows the pure Hebrews to be so decidedly inimical. We know that these are questions with which ordinary historians do not trouble themselves, and which a large school of otherwise profound

thinkers purposely ignore. But our purpose is to show that no history worthy of the name can be written without, at least, the attempted solution of such ethnic problems that underlie the theological, political, social, and intellectual movements with which history professes to render us familiar, but of which it has hitherto only skimmed the surface.

We are rather severe on historians. We have been so in previous papers; but it must not be supposed that we treat them with any intentional disrespect, or that we regard their peculiar province as other than the very highest in the entire range of literature. But we wish to correct their errors, and show their shortcomings in connection with that minor department to which we have more especially directed our attention, and which, when further developed, cannot fail to throw additional light on those events, to whose narration their labours are devoted. In the meantime they will, doubtless, reply, that this further development of anthropological science in its bearing on historical researches rests with us, and we cheerfully admit the truth of the allegation; and shall proceed with our labours in the hope of their ultimately benefiting historians, if not those with whom it is our privilege to be cotemporary, at least those who may succeed them in an age of larger views and profounder thought, of wider outlook and deeper insight than the present.

As regards the acceptance of Buddhism by the Turanians, the subject divides itself into the conditions which favoured its diffusion, and the modifications it has undergone at the hands of its alien converts. And here the most signal fact which strikes an observer is that its greatest triumphs were not achieved at the heart of Turanian culture, that is in China proper, but rather among the nomads, and those circumambient peoples of pure or partial Turanian blood, but of inferior culture, such as the Cochin Chinese, Siamese, Burmese, and Thibetans; to say nothing of the insular Japanese, whose Buddhism assuredly demands profounder investigation than has yet been accorded to it. Moreover, in China it is not the literati who have accepted it. They to a man are the disciples of Confucius and Lao-Tseu. Thus, then, it would seem that it was not the presence, but the absence of ideas in the Turanian mind, which favoured the diffusion of this Caucasian faith. Was there not a somewhat similar phenomenon, though in a less pronounced form, attendant on the diffusion of Christianity among the civilised populations and barbarian conquerors of postclassic Europe? We shall hereafter see that this common speciality attendant on the propagation of these negative creeds was not an accident, but a necessity; because a normally characteristic feature of such theological products of an analytical and disintegrative era. Let us never

forget, in the course of these speculations, that the predominant creed of a time must be its best, because its truest exponent, and that while events are the fairest admeasurement of the spirit of an age in the sphere of action, beliefs are its most trustworthy indications in the sphere of thought.

We have said that the diffusion of Buddhism and Christianity synchronised with the triumph of the muscular races, that is of the Turanians in Asia and the Teutons in Europe, and we have also shown that these faiths are theoretically communistic and practically democratic in their spirit and tendency. Thus, then, it becomes at once obvious that the ethnic commotion and the theologico-socialistic revolution which ensued on the universal collapse of the old Caucasian civilisation, were but consentaneous parts of the same humanitarian movement, contributive streams to the same mundane (ebb) tide. It was everywhere the same triumph of quantity over quality, of matter over mind, the return to chaos preparatory to re-creation, the baptism of death previous to re-birth. It was this to the nervous races—its subjects. It was exactly the reverse of this to the muscular races—its agents. They were then at their perihelion, at their maximum of energy in the sphere of action, and, perhaps, of susceptibility in that of thought. It was their floodtide, their positive era of growth and progress, when they not only culminated in power but expanded in intellect, beyond the experience of any former age. Hence, then, the readiness with which the Turanians accepted an Aryan faith, and the facility with which the western Aryans submitted to the inoculation of such Semitic ideas as are involved in Christianity.

We may now then begin to understand not only how geographically extensive, but also how profoundly searching was that stupendous movement, which eventuated in Gothic supremacy in the West and Tartar domination in the East. It was a result for which the sure preparation had extended over many previous ages, and for its ultimate success, it demanded not merely the arousing of the muscular *races* from without, but also a corresponding insurrection of the muscular *classes* from within. This requires explanation. Caste, as we have already remarked, when rightly based, is simply race within race. This, of course, implies that the highest caste has the purest blood—the best development of the nervous system, the finest structure of body and the most vigorous constitution of mind. It need scarcely be said that this is only so, when caste has been legitimately developed from within among the higher races, or, as in the case of ancient Egypt and India, has been imposed by them, in virtue of conquest and immigration, on the lower. In either case we may find caste in its vigour. But to this condition of things, with its good of

edification and its ultimate evil of restriction, there is an inevitable termination, the effeteness, mental and physical, of the ruling orders, and the consequent insurrection of their subjects on the one hand, and the irruption of their enemies on the other. Both were magnificently exemplified on a truly mundane scale at the great collapse of high Caucasian culture to which we have been alluding. Now such an insurrectionary movement from within, as we have been describing, implies not merely the submergence of the temporal aristocracy, but the spiritual hierarchy of a people. Buddhism was the form which this insurrectionary movement assumed in India, where, owing to the old hierarchical constitution of society having survived, the conflicting elements are more clearly defined than in the West, where the temporal had long dominated the spiritual power.

We thus see why Buddhism, though the product of an Aryan area, was, nevertheless, so admirably adapted to Turanian requirements. It was both theologically and ecclesiastically, in doctrine and organisation, in spirit and in practice, the outcome of the lower, and, therefore, semi-Turanian elements of Hindu Society. It was the voice of social insurrection responding to the shouts of military invasion. It was "the fountains of the great deep," meeting the floods which poured down when "the windows of heaven were opened" for the production of a universal deluge. That the force of these remarks may be fully understood, let us remind the reader that the highest caste, in every well-regulated community is the most thoroughly Caucasianised, and that as you descend the scale, the tendency is towards Turanian specialities of structure and characteristics of mind, in an Aryan people, while in a Semitic it would conversely be towards a Negroid form—each family approximating, in its ruder members, to the coarser type of its wild correlate.

Ere concluding these remarks on Buddhism and Christianity in their relation to racial movements and characteristics, a few words on their prospective fortunes, as dependant on the same forces, may not be altogether misplaced. And here we may premise that from the entire tenor of the foregoing remarks, the reader cannot fail to have perceived that we regard these faiths as essentially transitional, and, therefore, almost purely negative forms of the theological idea; in short, to use a modern phrase, the Protestant phase of religion, as contradistinguished from its more positive aspect, under the hereditary hierarchies of monumental and traditional civilisation. Hence the propriety of their being the dominant creeds of humanity during the rule of the muscular races, and the especial fitness of Buddhism, as the lower and less spiritual of the two, for the Turanian type. But if

this view be correct, their tenor of power cannot fail to be affected by the great racial fact of our day, the present resurrection and approaching predominance of the nervous races, which must eventuate in a reedification of society on a hierarchical basis, and the restoration of religion from its negative and Protestant to its affirmative and positive form. Now this reedification, whether in the theological, political, or social sphere, throughout the entire Caucasian area, is a mere question of time and circumstance. As a great humanitarian eventuality, it is inevitable, whatever the *how* and the *when* of its effectuation. While, coincident with this, there cannot fail to be the conquest and colonisation of Turania, a process we fear fatal to the levelling tendencies, if not the pantheistic proclivities of its adopted and much cherished Buddhism. Still here, if anywhere, caste will be resisted, to which in its true hierarchical form, more especially, the material element in humanity is most decidedly inimical. The example of India is, however, fatal to such a hope, for here we see a primitive Turanian area, converted by successive Caucasian conquests and immigrations, into the most enduring seat of caste the world has ever known. Now there is nothing to prevent not only Burmah and Siam, but even China itself, from becoming a second India, in that epicycle of Caucasian greatness which will renew the Aryan conquests of former ages, and carry European institutions not only to the banks of the Ganges, but the shores of the Yellow Sea.

But the future can only be, in a measure, the epicycle of the past. Prospects imply retrospects; let us then indulge in them for a moment as regards Iran and Turan, more especially in relation to their common faith. Buddhism and Christianity were once regarded as radically distinct creeds, the former wholly of Aryan and the latter of purely Semitic origin. We now know that the incarnational element which underlies both, and which they share in common with Brahmanism, is solely of Aryan lineage, being the culminating point of that spiritual Pantheism, which is the normal theological product of the intellectual division of the Caucasian family, and directly opposed to the pure theism of the more morally exalted Semites. Strictly speaking, then, Buddhism and Christianity are the modern phase of the olden incarnational faith of the ancient Aryan hierarchy, of which we have a decadent remnant in existing Brahmanism, but which, under various forms, seems to have prevailed, throughout the larger portion, if not the whole of the Aryan area, and of which there are still perceptible traces in Classic, Celtic, and Scandinavian mythology. Such an area implies a proportionate antiquity, antedating not only history but tradition. Here, then, we have the key to some rather difficult problems, not only the rela-

tionship of Buddhism to Christianity, but also the diffusion of the latter throughout the West, a result of the long previous preparation of the European mind for its reception, combined with the ethnic fact of its profound adaptation to the mental constitution of its converts. Does not this profound antiquity also indicate the possibility of previous action on the Turanian mind, in ages when historic Buddhism was certainly unknown, but when a prehistoric form of incarnationalism flourished, whereof the worship of Creeshna in the east and Odin in the west are long reverberated echoes.

We have spoken of Buddhism and Christianity as modernised forms of the ancient Aryan faith, adapted by the non-hereditary character of their hierarchy, and other changes in their ecclesiastical constitution and social tendencies, to the requirements of a disintegrative era and the rule of the muscular races. But it must not be supposed that the Semites wholly escaped the influence of that mundane tide, which substituted the Lama for the Brahman, and while it placed a celibate Pope in the chair of St. Peter, brought Attila to the Danube and Alaric to the Tiber. The faith of Islam is Judaism, deprived of its Levites, and devoid of its sacrifices. It is Semitic theism, stripped of its hereditary hierarchy and imposing ceremonial, a magnificent spirit waiting for its time vesture. In truth, the outburst of the desert Arab from the South, was profoundly akin to that of the yet ruder Goth from the North. It was an iconoclastic barbarism, overwhelming the venerable remains of an effete civilisation, and differed from the former movement only in the fact that its agents were Semites not Aryans, and so monotheistic rather than Pantheistic in their theological proclivities. Was it not, indeed, more immediately due to these internal conflicts of the Caucasian peoples, that the Turanian Nomad was enabled to make so large and so lasting a lodgment within their area. Let us remember that it was not only Goth against Roman, but also Arab against Persian, ere the throne of the Seljuks was founded on the ruins of Saracenic power, while the rise of the Osmanlies was, in a sense, consequent on the Aryan exhaustion which followed the crusades. The more profoundly history is studied, the more clearly manifest becomes the existence of these mundane tides, whereof, the analytical and disintegrative movement to which we have been alluding, is the most important on record, whether contemplated ethnically, as the world-wide triumph of inferior races, or morally, as the displacement and dilapidation of languages and institutions, religions and philosophies, which accompanied and followed this temporary submergence of the higher by the lower type of humanity.

If in the course of these speculations we have ventured upon any-

thing approaching to vaticination, let it be distinctly understood that we do so with all diffidence, and in the full consciousness that our most carefully considered conclusions are liable to utter falsification from forces and combinations altogether beyond our ken. With this understanding then, let us for a moment contemplate the probabilities of the future, in so far as they seem dependant upon Ethnic conditions. The world is now in the process of recovery from the racial collapse of its higher types ; and in this resurgence it is the Aryan and not the Semite who is the more immediate heir of empire. This decides that it is the Turanian rather than the Negro, who is to be the principal alien recipient of the civilising influences of the more immediate future. These influences must bear the predominant stamp of western Europe, and this implies Aryan intellectuality sublimated by Semitic aspiration, the noblest combination the world has ever seen. Theologically, this means Semitic belief in the unity of God, and Aryan affirmation of the divinity of man, in pulpit phraseology, that humanity is the Christ, God manifest in the flesh. It is this infusion of the Semitic element of unity, even in its present very imperfect form, which has given existent Christianity its admitted superiority to the more eastern phase of incarnationism, and which purified of its tritheism, and its adoration of the Virgin, will raise Brahmanism from its practical Polytheism, and Buddhism from its virtually atheistic pursuit of the negative felicity of Nirwana. The good missionary who now goes out to fight his brother pantheists in the farther east, will perhaps some day learn that when "nations are born in a day," it is not through the sectarianism that denies and derides their Gods, but rather that universal "charity which believeth all things," and which consequently appeals, not to the superficial errors of use and wont by which men are divided, but rather to those fundamental truths in which, despite of time and distance, they are found to agree.

But the imperial predominance of Europe implies "conversion," not only in the theological, but also the political, social, and intellectual sense of the term. Whatever elements of European life, Persia, India, China, and Japan can absorb and assimilate, they will, and the degree of their receptivity must depend on that of their consanguinity ; and in this process it is possible that the oriental Aryans will be found most important instrumentalities, as a time-honoured medium between the extreme west and the extreme east, literally, between the resuscitated Celt and effete Mongol. This movement has already commenced. India is being slowly but surely Anglicised, and when we have got rid of our vulgar, materialistic, and in truth, semi-mongolic Philistinism, on the one hand, and our petty, bigoted

sectarianism, on the other, this process of practical conversion will go on apace. We have also inaugurated direct commercial relations with China and Japan, and these cannot fail to be followed by others of a yet higher character.

But in these speculations, we should never forget that there are prejudices of race as well as of faith, and that our tendency, in virtue of ethnic relationship and geographical position, is to unduly exalt the Celt and proportionately undervalue his neighbours. In the matter more immediately before us, for example, it will be well to remember that the racial correlate of the Mongol is the Slavon, while the Tartar finds his Caucasian congener in the Teuton. Russia and Germany, then, must not be omitted in our speculations on Asia's impending futurity. While even as regards India, its profounder lingual and other specialities, rather ally it to the Classic than the Celtic area of the west, our more immediate oriental kinsmen being, neither Aryans nor Turanians, but Semites, to whose relationship and destiny, we may perhaps hereafter devote a special article.

The Slavon already possesses Siberia, while he is conquering Tartary and threatening China. In truth, the conquest of Asia by Europe is much farther advanced in the north than the south. The great and all-important fact, however, for the Turanians, and more especially for their Nomads, is the railway. Their age of geographical isolation is at an end. In less than a century their steppes will be no longer an impenetrable retreat; and here we are again brought face to face with another great ethnic problem, the possible extension of the Caucasian type over a Turanian area. Has this been a realised fact in the past, and is it a possibility in the future? And this, again, involves the yet deeper problem, whither is humanity tending, upward and onward to gradual Caucasianisation, or downward and backward to a Mongolic type on the one hand, and a Negroid type on the other. Granting that there is a change, no anthropologist can doubt that its direction is towards improvement, in accordance with the movement of organic life from its commencement in the incalculable remoteness of geologic time; and thus we are brought to the root of the whole matter, are we not now in the midst of a racial crisis, itself probably the result of telluric progress, demanding and evolving a higher organic development of the intellectual type of earthly being? What does the rapid disappearance of savage races mean, more especially over such enormous areas as America and Australia? From these remote regions Europe is separated by wide and tempestuous oceans, while the fertile yet woodless and unencumbered plains of Tartary will invite the teeming myriads of her industrious agriculturists, more especially from the central and

eastern states of Germany, to come and till them, whenever the iron road and the fiery horse of modern civilisation shall have penetrated within their borders. Let us remember that the full resurgence of the west implies the conquest and colonisation of the east; that the resurrection of the nervous must eventuate in the racial baptism of the muscular races; and, if we mistake not, it will be found, when Asia becomes for a season the appanage of Europe, that Germany holds a peculiar ethnic relation to Tartary, and Russia to Mongolia.

We are aware that these speculations verge towards apparent conflict with what may almost be termed the accepted and established principles of anthropological science, in regard to the permanence of racial type over given areas,—principles not lightly to be invaded, and to whose guidance we owe many important conclusions, on subjects otherwise beyond our grasp. But what we here mean is not oscillation of type occasioned by passing events, but that ethnic baptism by racial correlates, which is obviously a recurrent fact in human history, and therefore we may say a normal and periodic phenomenon in connection with the wellbeing and development of man. And this baptism, now about to be experienced by the lower Turanian type, is one of innervation, and therefore preeminently of organic growth and elevation. Let us clearly understand, that a baptism of bone and muscle is simply a process of *restoration* to the higher type. The utmost which they can acquire in such a process of renovation is increased *breadth*, as a better basis, a stronger foundation for the loftier superstructures of after-ethnic development. But a baptism of nerve to the lower races is more than this. It not only restores them to their former state of mental vigour, but, we have reason to believe, infuses additional vitality into their system, and so prepares them for the organic development befitting a more advanced stage of telluric growth. As already remarked, *this* underlies all the changes of which palæontology has revealed the record,—improvement of type, whether in the vegetable or animal kingdom, when normal and permanent, being but the necessary result of adaptation in the type as an organ, to the more advanced condition of that general earthlife, whereof it presumably discharges some special and really important function. It is the want of these profounder views which renders botany and zoology so superficial and unsatisfactory, and their absence will render anthropology proportionately incomplete. Man, contemplated apart from the earth, of which he is the noblest, though as yet, perhaps, the most nearly germinal organ, will never be fully understood. It is only, indeed, when seen in this connexion, and with the frank admission that he is yet, even in his most advanced species, but an initial type, that we begin to understand the utter insignificance

of his present, as compared with the greatness of his future. It is only when beholding humanity from this standpoint that we can fully recognise its merely rudimentary character as a telluric organ, and so become prepared to admit the possibility of its ulterior development into genera and orders, as yet so feebly pronounced as to be all but undiscernible by the keenest observer, even though he were not blinded by those traditional idola, from which it is to be feared none of us are wholly exempt.

And this brings us to the legitimate conclusion of this rather lengthened argument, what is the Turanian,—not as the Buddhistic disciple of the higher Iranian, but *per se*,—not as modified by alien influences, but in himself, as an aboriginal type of humanity, endowed with a certain corporeal structure and corresponding mental constitution, and so taking his own place in the universal scheme of things?

And first, as to his habitat. Is he primarily arctic, or only northern, as contrasted with the intertropical or Negroid type of man? We incline to the latter view; which, however, involves the logical necessity of regarding the Negroid and Turanian as the two generic types of the southern and northern man respectively, on the plane of unassisted nature, the Caucasian being, in his Semitic form, a higher development of the former, and in his Aryan, of the latter. Let it be distinctly understood that we throw out this idea simply as a suggestion, without the slightest wish that it should be regarded as other than an incentive to farther inquiry. This again involves the conclusion that the Turanian was once the all-pervading race, not merely of northern Asia, but also of the larger part of Europe. We use these qualifying terms because there seems to have been a negroid type in southern India, of which the Andaman islanders and the aborigines of the Indian Archipelago are probably a degraded remnant, and an Iberian or Kabyle type in Spain, and perhaps southern Italy, from before the remotest ages of tradition.

Let us remember, in the course of these speculations, that excluding the Arctic, or Esquimaux, and Samoyede families, on the one hand, and the eastern or colonial Aryans, on the other, we find a well-regulated gradation, in organisation, from the rude Mongols on the extreme east of the Old World, through the Tartars, Slavons, and Teutons, to the high-caste and nervous Celts of the extreme west. The classic peoples, like the eastern Aryans, have probably been affected by a Semitic infusion, whereof, indeed, tradition has preserved a faint remembrance in the story of Cadmus. On this view Europe, as the highest ethnic area within the old Turanian realm, became the point of emergence for the Aryan type; as, conversely, Arabia served the same purpose for the Semites. Let us here remind the reader

that the primarily determining element of type is, we have reason to believe, telluric influence, whereof that of every distinctly marked ethnic area has a peculiar character reflected in the organisation of its aborigines, fundamentally unalterable; except through those changes which the lapse of geologic time introduces, and palæontology records.

Now, what does Palæontology teach? Why, that the tendency of the animal kingdom is towards the development of the nervous system—equivalent to the gradual ascent of organic life in the scale of being. Now, this principle applied to humanity at its present stage, means Caucasianisation; or, as we have said, development out of the Negroid into the Semitic; and out of the Turanian into the Aryan type. Now, granting such a process to be not only possible but actual, we can readily understand that its results would be accomplished partly by ethnic growth of the aborigines from within, and partly by supercession, or rather by racial baptism, in the form of immigration from without. Are there any facts to support these views? Does not archæology indicate the presence of a Turanian people, with an agglutinated language, on the site of Nineveh and Babylon? Do not languages, type, and tradition combine to indicate that India was once a part of the Turanian area? And within comparatively modern times, have not the Lapps yielded before their Caucasian neighbours throughout a considerable portion of Norway and Northern Sweden? And to a keen anthropological observer, are there not obvious traces of an underlying Turanian element throughout the larger part of Europe, and even in the comparatively pure and isolated Celtic area of Britain? Nay, is not this perceptible even among the wild tribes of London, more especially when they are selected yet massed, as at an execution—just as the Iberian element in Ireland affords unmistakeable evidence of its Negroid relationship among the more neglected peasantry of Munster and Connaught. This study of the lower castes, for let it not be supposed that caste, even in the most confused and revolutionary age, ever can be virtually abolished, will yet yield a rich harvest of ethnic facts of the utmost importance to anthropological science.

We may then define the Turanian, by saying that he is the ethnic root, the wild stock, the material basis of the Aryan. This implies breadth and its product, animal force, as we have already said, a predominantly basilar brain, in which moral sentiment and intellectual faculty have less preponderance over passional impulse than in the higher Caucasian. In such a race the mind will be mechanical rather than artistic, and incline to correct imitation rather than daring innovation. The character will be essentially practical and matter-of-fact,

manifesting Philistinism at the maximum, inclining neither to abstract thought on the one hand, nor æsthetic culture on the other. The learning of such a people will eventuate in a laborious pedantry, and their manners be constrained by a rigid and burdensome ceremonial. Their popular religion will be a gross superstition in its beliefs, and a childish ritual in its celebration. Intellectual culture will land them in philosophic Pyrrhonism, when it does not carry them on to its legitimate terminus, blank Atheism. What has been said of tendencies nearer home here finds its effective realisation, "a philosophy or a superstition." This extreme form of the Turanian mind will, however, be manifested in all its force only by the eastern, or Mongolic, branch of the family, of whom we see the civilised phase in the Chinese.

And what then is China? A mere recipient, and so an expiring echo, of prehistoric Caucasian culture, or a veritable though fossilified remnant of primeval Turanian civilisation, arrested at the monosyllabic stage of lingual development; and so, probably, antedating not only Classic, Assyrian, Indian, and Egyptian, but even Cyclopean civilisation, and ascending to an antiquity of which no Caucasian people need dream in the way of rivalry. The speciality of China is that it represents the highest, yet the oldest, phase of Turanian culture, which has, moreover, been developed, not among the superior Tataric, but the ruder Mongolic type of the race. In geographical position, too, it is at the eastern extremity of the Turanian area, and so at the farthest remove, at least in longitude, from the great centres of Caucasian civilisation. We have here then an accumulation of evidence in favour of its aboriginality; a conclusion still further supported by its peculiar character on which the influence of race is so unmistakeably stamped, that it is unique among the great empires of the world, whether for its political constitution, its social organisation, its religious institutions, or its predominantly literary and philosophic culture. Every feature is indicative of a people in whom the intellectual dominates the moral nature, and who inaugurated civilisation at a very early, and we might almost say, rudimentary stage of human development. Nowhere else has the religious element been at so low an ebb. Among no other civilised people has the spiritual been so thoroughly and systematically subordinated to the temporal. Among no Caucasian people, even though of purely Aryan descent, without the smallest Semitic admixture, would such arrangements be even remotely possible. In no other type could mere childlike imitation so thoroughly dominate every other faculty. Nowhere else could mere mechanical ingenuity have attained to such excellence, without even the dawn of fine art. Here then is a community, trained under all the refining

and exalting influences of an immemorial civilisation ; nevertheless, devoid of most of the nobler emotions, the grander aspirations, and the richer endowments of humanity ; whose religion never rises to devotion ; whose obedience springs not from loyalty ; whose manners may be polite, but whose feelings are not chivalrous ; and whose acquaintance with facts is unaccompanied by even an attempt at the mastery of principles ; and whose whole life-environment, consequently, rests on a purely material and merely practical basis. Who may be producers and consumers, makers and vendors, subjects and rulers ; but not, in the higher sense of the terms, heroes and statesmen, artists and poets, saints and prophets. To the cerebral physiologist, there can be no doubt as to the predominant type of such a people. Their endowments on the one hand, and their limitations on the other, are alike indicative of strength in the basilar and weakness in the coronal region. Hence their culture, in perfect correspondence with this, is emphatically that of the muscular, as contrasted with that of the more nervous races. It is the condition of a people permanently arrested, as we have said, at the monosyllabic and infantile stage of development. We have no doubt that it was not only Turanian, but Mongolic in its origin ; for in all its grander outlines, and in all its profounder characteristics, it still bears unmistakable traces of the racial type of its founders : the flat-faced, flat-headed, fibrolymphatic, and impassible men of the east, and not the high-featured, coronally exalted, nervous and susceptible men of the west.

J. W. JACKSON.

OWEN'S COMPARATIVE ANATOMY AND PHYSIOLOGY.*

THE generation of scientific men, whose names have become familiarised to the general public, seem all to be preparing new and complete editions of their works ; or otherwise, summaries of their life-labours. Murchison has just brought out a new edition of his *Siluria* ; Lyell, an amended edition of his *Principles of Geology* ; and we have now before us the first two volumes of Owen on the *Anatomy and Physiology of Vertebrates*.

* On the *Comparative Anatomy and Physiology of Vertebrates*, Vol. 1 and 2. By Richard Owen, F.R.S., Superintendent of the Natural History Department of the British Museum, Foreign Associate of the Institute of France, etc. London : Longmans and Co.

No student of science can carefully examine this recent edition of Professor Owen's contribution to the *Comparative Anatomy of the Vertebrates*, without being struck with admiration by the zeal and industry which the work evinces. It is in many respects, indeed, a model for scientific writing. But whilst we pay homage to its technical excellence, we cannot but regret that the general style of the author is of that cold, reserved nature which renders the study of his book a work rather of difficulty than of intense pleasure. With the exception of a few brilliant touches here and there, the diction really gives us no sort of insight into the character of the author; nor does it tell us what are his true sentiments respecting some of the great scientific questions of the day, on which the work necessarily treats. We cannot but think that this restrained and over-cautious mode of writing is a great derogation from the worth of the book before us. Were Professor Owen more frank as to his scientific opinions, he would, we think, meet with a more generous and enthusiastic appreciation from the rising generation of students. Professor Owen's haughty style would seem to indicate that he does not think contemporary cultivators of science worthy of his confidence. He probably feels, but too painfully, how great is the difference between the flippant dogmatic biologist of the modern English school and the simple-minded, earnest, and charitable naturalist of times apparently gone by. We can readily understand that the quarrelsome, emulous tone of discussion, which has become so fashionable in certain scientific circles, is most repugnant to the author. He possibly feels this the more from the fact that he himself has been attacked by a party of biologists, with a vigour and rancour never before, we believe, introduced into scientific debate. Let the grounds of complaint be what they may, we cannot excuse, nor even palliate, the vindictiveness and acrimony with which charges are continually brought against the author of this work. To pretend that a difference of opinion respecting the due statement of a scientific fact, should be considered as a question of "personal veracity" only, is to set an example to younger students of science which we hope will never be followed.

We do not intend to drag our readers over the ground on which the savage contest has, during the last few years, been raging, in respect to the structural distinction between man and the apes. If it were possible, we should be glad to let the dispute pass into the oblivion it deserves. The discussion is, however, touched on in the present work, and the reference will go down to posterity as the author's final vindication of his views on the subject. Without wishing to express an opinion as to the truth of the writer's observations, we only feel it our duty to chronicle what our author has to

say respecting the charges so frequently, and, we fear we must add, often so flippantly brought against him, of wilful misrepresentation. We are sorry that one student of science should feel at liberty to make such a charge against a fellow student. It will be unfortunate for science if the jealousy and rivalry displayed in the discussion we have commented upon, should become, as it threatens, a general custom amongst its disciples. At page 272 of the second volume, we find these words: "In man, the brain presents an ascensive step in development, higher and more strongly marked than that by which the preceding subclass was distinguished from the one below it. Although in the highest *gyrencephala* the cerebrum, figs. 148, 149*b*, may extend over the cerebellum, *d*, in man not only do the cerebral hemispheres, fig. 149, *b*, overlap the olfactory lobes and cerebellum, *d*, but they extend in advance of the one, and further back than the other. Their posterior development is so marked that anatomists have assigned to that part the character of a third lobe. It is peculiar, with its proportionally developed posterior ventricular horn and 'hippocampus minor,' to the genus *homo*. Concomitantly with the correspondingly developed anterior lobes of the cerebrum, the ventricle is, in like manner, produced into a hornlike form, in advance of the 'corpus striatum.' The superficial grey matter of the cerebrum, through the number and depth of the convolutions, attains its maximum of extent in man. Peculiar mental powers are associated with this highest form of brain, and their consequences strikingly illustrate the value of the cerebral character; according to my estimate of which, I am led to regard the genus *homo* as not merely a representative of a distinct order, but of a distinct subclass of the mammalia, for which I have proposed the name of 'Archencephala.'"

Such are the matured and deliberate expressions of the author's opinion. We shall not now dwell upon any of his assertions, or stay to inquire whether man has really any peculiar mental powers; much less shall we attempt to debate the general question of zoological classification, into which we are necessarily led when estimating the value of a proposal for the recognition of any distinct order or class of animal life. So far as the author's truthfulness is concerned, the question which each must decide for himself is, not whether Professor Owen is correct in making mankind a distinct order or a distinct subclass, but whether such opinions are in accordance with the general principles of classification enunciated, and with the changes proposed in other instances. We must endeavour to relinquish for a time our own stand-point, and look at the question from that of the author. We may accept the general facts without at all assenting to the conclusions. We confess, indeed, that we think it of

comparatively little importance whether our author makes mankind a species, order, subclass, class, or even kingdom, so long as he follows some definite and clearly expressed principle. To quarrel with an author for preserving his own consistency, is to betray a want of philosophic calmness or candour greatly to be regretted. We see no occasion for raving at the author for raising man to the dignity of a sub-class, because the superficial grey matter of the cerebrum attains its maximum of extent in him, or because the cerebral hemispheres overlap the olfactory lobes and cerebellum. Those who have endeavoured to work out the subject of biological classification for themselves will be the last to denounce an author for expressing his opinion of the zoological value of the characters indicated. If we do not recognise the asserted facts, we may still receive, with all the attention it deserves, and with all the reserve we think proper to maintain, the judgment of an author respecting the value of such facts. We do not wish it to be understood that in our judgment, Professor Owen's opinion that mankind should be erected into a distinct subclass is an authoritative and final decision, which will meet with acceptance by all men of science. On the contrary, we would decidedly warn our readers against hurriedly promulgating any views on this subject. Cerebral anatomy is yet in its infancy, whilst cerebral physiology, in the true sense of the word, is scarcely yet in existence. The more we study anatomy, and the more we investigate the functions of animal structure, the more do we become convinced that every theory of classification is but the expression of the individual author's opinion respecting the degree in which different forms of life vary from each other. The sharp and rigid distinctions formerly supposed to exist, are by the majority of recent naturalists seen to be unwarranted by the facts at present known to us. The discovery that the animal and the vegetable differ from each other only in certain degrees of development has, we think, prepared the way for, and to some extent justified, the extraordinary revolution of ideas which has during the last few years taken place amongst a large number of men of science. Mr. Darwin and his able and zealous coadjutors in this country, have been the means of producing one of the greatest scientific convulsions ever known. Old and young have alike joined in this excitement, only to be likened to one of those abnormal moral fermentations, the outcrop of widespread fanaticism, and known under the name of religious revivals. But it differs from the ordinary religious revival, inasmuch as it is caused rather by a want, than by an excess of faith; it is, however, none the less fanatical because it is sceptical. How many scientific men have, within the last ten years, lost their faith in the existence of species? And yet, during this time,

more facts have been acquired showing the permanency of species than in any decade of the world's history. The future historian of the present scientific period, will be unable to overlook the extraordinary effect produced by Mr. Darwin upon his contemporaries. It will be in this history that the author of the work, now under our consideration, will stand forth pre-eminently, as one of the few who have not shared in the prevalent scepticism respecting the actual existence of species. Mr. Darwin, in his *Origin of Species*, only expected to obtain disciples among the rising generation of scientific men. He misjudged entirely the stability of the opinions of most of his brethren; while, we trust, his prediction regarding the younger family of naturalists will be alike unverified. Whatever our opinion may be of the scientific conclusions of such men as Owen and Murchison, we cannot but think that these two veterans have earned the gratitude of those of their younger colleagues who have declared that loyalty to facts shall be the object of their lives. We have already delayed our notice of Professor Owen's important work so long that, were it not for our desire to bring it before our readers, we should much have preferred to allow our opinions to have been reserved for the time when the prevailing hallucinations respecting species shall have been numbered amongst things of the past. But the contest still rages. It has spread, like the cattle-plague, throughout England. It has produced its effect on the scientific mind of Germany, and is now clamouring for converts from amongst French *savants*. "Darwinism makes many converts in Germany, but none in France." Such was the report we heard not long since; but we now believe that converts have been obtained in the ranks of French naturalists. We have said that the writings of Professor Owen fail to secure that confidence, on the part of his readers, which is so essential to an author's influence. The reticence, which it has now become his habit to preserve in all his works, is most injurious to his power as a teacher. In an age when most scientific men amuse their readers, and caution their colleagues, by a loud profession of their own faith, and a continual reiteration of what they may eventually choose to believe, we must be struck with the absence of all this from Professor Owen's works. While Mr. Darwin and his disciples bore the world with their beliefs and disbeliefs, Professor Owen confines himself to a higher plane of science,—an enunciation of the facts he knows, and the observations he has made.

A few detached extracts from the work itself may serve to indicate its spirit and style. In a remarkable passage, in which the author classifies the different branches of animal morphology, we are glad to

find a well merited sneer at the term "philosophical anatomy", when unduly appropriated :—

"The anatomist may apply himself to a particular organ, instead of a particular species, either exhaustively in one animal, or by tracing such organ or system throughout the animal kingdom. The 'neurotomies' and 'neurographies' to which Joseph Swan, *e. g.*, has devoted a laborious life, the 'osteographie' of De Blainville, and my own 'odontography', are examples of this way of anatomy. John Hunter assembled the evidences of his labours in the unique and grand department of his museum illustrative of anatomy, properly so called, in series, according to the organ, beginning with the simplest form, followed in succession by the progressively more complex conditions of the same organ, the series culminating, in most cases, with that which exists in the human frame. The mechanism of the organ is here unfolded, and its gradations were compared to discover its mode of working ; and as 'physiology' mainly consists in such determinations of functions or final aim, this kind of investigation of organic structures might be termed 'Physiological Anatomy.'"

"Homological Anatomy" seeks, in the character of an organ and part, those chiefly of relative position and connexions that guide to a conclusion, manifested by applying the *same name* to such part or organ, so far as the determination of the namesake-ism, or homology, has been carried out in the animal kingdom. This aim of anatomy concerns itself little, if at all, with function, and has led to generalisations of high import beyond the reach of one who rests on final causes. It has been termed, grandiloquently, "Transcendental" and "Philosophical"; but every kind of anatomy ought to be so pursued as to deserve the latter epithet.

A fourth way of anatomy is that which takes a particular species, in the course of individual development, from the impregnated ovum, tracing each organ, step by step, in its evolution, up to the adult condition. It is called "Embryology", and "Developmental Anatomy."

"A fifth way of anatomy is that which investigates the structure of an animal in its totality, with the view of learning how the form or state of one part or organ is necessitated by its functional connexions with another, and how the coordination of organs is adapted to the habits and sphere of life of the species ; but it does not stop here, having for its main end the comparison of these associated modifications and interdependencies of organs in all the species of animals. As their degrees of affinity and the characters and circumscription of natural groups are hereby illustrated, this way may be termed 'Zoological Anatomy.'

"In the hands of the anatomist, the microscope has been mainly applied to the constituent parts of an organ called 'tissues' ; and the results of such research, combined with those of chemical tests, constitute a sixth sort of anatomy called 'Histology'. It has been termed

'Microscopical Anatomy'; but this is essentially only a more refined method of the scrutiny of organic parts. In so far, however, as 'Histology' treats of structure, according to the proximate tissues common to different organs, it corresponds with the branch of the science which Bichat, its founder, called loosely 'Anatomie Générale.'

"Finally, a seventh way in which the highest generalisations in biological science may be aimed at, is that which is taken when we pursue investigations of forms and structure beyond the animals that *are* to those that *have been*. Here, however, the anatomist is limited, as a rule, to pick such tissues and organs as are petrifiable, *e.g.*, corals, shells, crusts, scales, scutes, bones, and teeth; but he has been stimulated to a degree of minuteness and accuracy of observation in this field of research to which few of the other ways and aims would have led him. In applying the results of such researches to the restoration of extinct species, physiology has benefited by the study of the relations of structure to function requisite to obtain an insight into the food, habits, and sphere of life of such species; and zoology has gained an immense accession of subjects through such determinations, with improved systems of classification due to the expanded survey of organic nature opened out by 'Palæontology.'"

In another place Professor Owen well says,—

"Zoological anatomy is now an indispensable instrument to the classifier, if not to the determiner, of the species of animals. The anatomist, properly so called, but commonly qualified as the 'comparative' one, makes known the results and applications of his comparisons of structure in zoological as well as homological or anatomical works. The 'Règne animal' and the 'Leçons d'anatomie comparée' of Cuvier exemplify these different applications and ways of exposition of his science.

"As a zoologist or classifier, the anatomist avails himself of the definite modification and full development of a part or organ indicating and predicating of such conditions by special terms for the required character. The 'fin,' the 'hoof,' the 'paw,' the 'foot,' the 'hand,' are to him so many kinds of limbs, the presence or absence of which serve to differentiate his groups; anthropotemical terms of parts of the brain reaching their full and characteristic development in the mammals or in man, *e.g.*, 'fornix,' 'corpus callosum,' 'hippocampus minor,' 'posterior cerebral lobe,' etc., serve and are used absolutely for the same end; so likewise with regard to special forms and proportions of teeth indicated by the terms 'canine,' 'carnassial,' 'tusk,' etc.

"The absolute way in which the things or characters so designated are affirmed or denied in zoological definitions is essential to their purpose."

In another part of his preface, Professor Owen bitterly complains of misrepresentations of his views, and observes,—

"The distinctive characters of the human brain, such as the manifold and complex convolutions of the cerebral hemispheres, their extension in advance of the olfactory lobes, and farther back than the

cerebellum, thereby defining a posterior lobe, with the corresponding 'lobe of the lateral ventricle' and 'hippocampus minor,' are as available to the zoologist in classification as are the equally peculiar and distinctive characters of the *calcaneum hallux* and other structures of the foot. So much in connection with the 'fifth way' and application of anatomy, I regret to find myself compelled to state, in order to expose and stigmatise procedures, which consist in representing the homological knowledge and opinions of an author by his definitions in a purely zoological work, and in suppressing all reference to the descriptions and statements in the anatomical writings of the same author, where his actual knowledge and opinions on the natural homology of parts are given, and where alone they can be expected to be found."

But one of the most powerfully written passages of this kind in the whole work is that which we find in the second volume at page 273. It is one which possesses more than a transient interest. Its last two paragraphs are models of English composition, and furnish ample proof of the author's skill as a controversialist.

"Kuhl rightly characterises the homologue of the posterior cornu, which he found in a platyrrhine monkey, 'anfang des hintern, dritten Horns des Seitenventricles' (*op. cit.*, p. 70). 'The beginning of the posterior, or third horn of the lateral ventricle.' Tiedemann, with equal accuracy, defines the answerable part in the catarrhine quadrumana as 'scrobiculus parvus loco cornu posterioris' (*op. cit.*, p. 14). In regard to the posterior cornu in the brain of the Orang, he is silent as to any 'hippocampus minor.' It exists, however, in the condition described by Vrolik, in that ape and in the chimpanzee, as 'une éminence que nous croyons avoir le droit de nommer indice de pes hippocampi minor' (*vers. en Mededeel der Kon. Akad.* 1862, p. 13). These 'beginnings' and 'indications' of structure which reach their full development in man, in no way affect the value of the latter as zoological characters. In propounding them as such to the Linnæan Society in 1857, I forbore to encumber my memoir with reference to facts known to all who possessed the elements of comparative anatomy. Tiedemann's definition was the accepted one: "Pedes hippocampi minores vel unguis, vel calcaria avis, quæ a posteriore corporis callosi tanquam processus duo medullares profisciscuntur, inque fundo cornu posterioris plicas graciles et retroflexas formant, in cerebro simiarum desunt; nec in cerebro aliorum a me examinatorum mammalium occurrunt; Homini ergo proprii sunt" (*ib.*, p. 51). In like manner Cuvier had characterised the species of his order, *quadrumanus*, as having 'Pouce libre et opposable au lieu du grand orteil.' And he rightly affirms 'l'homme est le seul animal vraiment bimanus et bipède' (*Règne Animal*, i, p. 70). To adduce beginnings of structures in one group which reach their full development in another, as invalidating their zoological application in such higher group, is puerile; to reproduce the facts of such incipient and indicative structures as new discoveries is ridiculous; to represent the statement of the zoological character of a higher

group as a denial of the existence of homologous parts in a lower one is disgraceful. Mr. Flower was not the first to see in the hippocampal commissure the beginning of the corpus callosum; the homologues of 'cornu posterioris' and of 'hippocampus minor' were known in the orang before Professor Rolleston; and the homologies of the bones in the hind foot in mammals had been determined before Professor Huxley propounded them, to show that the hind thumb of the ape was a great toe, and that man was not the only animal who possessed two hands and two feet."

It is not our desire nor our business to act as judges in this matter. It is evident, however, that Professor Owen has now relinquished the position of defendant, and assumed that of plaintiff in making a very serious charge against three of his scientific colleagues. There is, unfortunately, no scientific tribunal in this country before which such a trial can take place. The Royal Society is the camp in which all these combatants live. The Anthropological Society has neither time nor inclination to inquire into their contradictory affirmations. Our author may be right in his opinion that Mr. Flower's conduct is "puerile," that Professor Rolleston's conduct is "ridiculous," and that Professor Huxley's conduct is "disgraceful." We are rather inclined to pass upon all the parties concerned, prosecutors and defendants, the severe judgment that their whole action in this matter is alike, to use their own terms, puerile, ridiculous, and disgraceful.

What a pleasant spectacle does this miserable controversy afford to the common enemy of all scientific progress—the enlightened British public! Had not the whole of the disputants put themselves out of court by the personalities they have introduced into the question, we should have felt it our duty to commend the affair to the decision of such a competent body as the *Société d'Anthropologie de Paris*. As matters stand, however, we do not desire to lower our fellow countrymen in the eyes of their scientific brethren in the West of Europe. On the contrary, we desire to proclaim that this unfortunate controversy is not a fair specimen of the scientific customs which generally obtain in England. There is not, perhaps, on the whole, more rivalry, jealousy, and cliqueism among English students of science than may be found in France or Germany, but we fear we must acknowledge that discussions on debated questions are in England carried on far more hastily, and with far more personality than in any other civilised community. We are ashamed that such should be the case; but we cannot hide from ourselves the fact itself. We cannot hope that the combatants in this strife will listen to reason, for, when envy and emulation are added to personal hatred, and a question is made one of personal veracity, all calm, much more chivalrous, conduct, becomes impossible. It is high time that all such discussions as that to which

we have called attention should be put a stop to. British scientific men must really form a league to frown down all personalities in the discussion of scientific questions. The leaders of scientific thought and opinion must themselves set an example in this respect. They must be content to relinquish their little cliques and coteries, and to look with a more catholic view on their fellow-labourers. We trust that we discern a better state of feeling amongst the great body of scientific men. Let there be no longer on the jar that back door of scientific admission which has so long existed in this country, and let every man stand purely and solely on his own merits and deeds. Jealousy will then be speedily eradicated from British science, for it will have nothing to feed upon.

We feel it our duty to express these views in this place because the work before us is one of England's classical productions of science. It is the work of a scientific veteran of whom England is justly proud, and the passages we have quoted are amongst the few which call for our censure. That the author has been goaded on to this defence by the critical attacks made on him, we are quite ready to believe. It may be that such attacks have been beyond human endurance, but a scientific man ought to be, and is, when properly developed like the late Edward Forbes, something more than human. It would be melancholy for us to think that the right study of science failed to make us better than the ruck of our fellows. A true man of science may love and hate, but his love must be only for truth, his hate only for conscious error. A love for personality in scientific controversy seems to be acquired by those who have been accustomed to indulge in it. Let biologists continue to "bark and bite, for 'tis their nature to," but let the students of the highest branch of biology, the science of anthropology, show by their forbearance that they are above all such conduct as that to which we have called attention. If a man values his own self-respect, and desires in his advancing years to look back on his career with satisfaction, he must make up his mind to be for ever on his guard against allowing his lower vindictive feelings to act in the place of his higher nature.

In making these remarks we are far from wishing or advocating the cessation of all disputes amongst men of science. There always ought to be, and, we believe, always will be, debates, even after natural selection or artificial selection has done its best or its worst. We see no reason why the greatest difference of opinion may not be expressed in gentlemanly language. Thus, in the following extract we see nothing to object to, though it sufficiently shows how greatly our author differs from Professor Huxley:—

"The fact of the homologous bones being determinable in the pelvic

limb as in other parts of the skeleton of mammals, does not make the grasping organ of the ape (fig. 176) the less a 'hand,' nor does it prove the lacerating organ of the lion (fig. 175) to be no 'paw,' nor the swimming organ of the seal (fig. 172) to be no 'fin.' Professor Huxley, however, by pointing out those homologies between man and the ape, under colour of a new element in the question, probably persuaded the 'working men,' for whom, as 'Government Professor'* in the school of science, he selected such a subject of instruction that it was an important argument in favour of their ape-origin. So speciously, indeed, was this old elementary fact in zootomy set forth, that the propounder succeeded in deceiving some non-anatomical authors into a belief that he had really made a discovery. See Crawford, *Antiquity of Man*, 8vo., 1863. Professor Huxley has very satisfactorily shown that the designation of 'Quadrumana,' or four-handed, is incorrectly applied to the family of monkeys. Their feet are real feet, although prehensile ones, but the upper limbs are true hands (see p. 18). Also Lyell, *Antiquity of Man*, 8vo., 1863, p. 476, et seq., whom I would refer to Cuvier, *Leçons d'Anatomie Comparée*, 8vo., 1805, tom. i, p. 376, 'Des os du coude-pied.'"

We so cordially agree with Professor Owen's general conclusions respecting the present aspect of the results of biological inquiry, as expressed in the last two pages of his Preface, that we deeply regret to be obliged to speak so severely of other parts of the work. We would strongly advise our author to evince his superiority over some of his contemporaries by writing a new Preface, and by suppressing the passages we have named, and all other of similar import. Thus amended, the work will go down to posterity as an honour to the author and to the country of his birth.

If the anthropologist turns to this great summary of our knowledge of vertebrate anatomy with the idea that he will there find the results which, during the last few years, have been achieved in the field of comparative anthropology, he will, we are sorry to say, be greatly disappointed. It would not, perhaps, be fair to complain of the small space allotted to man in this work,—since it was not consistent with the plan which the author has followed in describing other orders, to detail

* This expression is, we believe, borrowed from the editor's preface to Carl Vogt's *Lectures*, 1864. "Prof. Vogt acknowledges that, to a great extent, he is willing to accept the conclusions of England's great modern naturalist, Charles Darwin; but, unlike many of that profound observer's followers in this country, he entirely repudiates the opinions respecting man's unity of origin, which a section of Darwinians in this country are now endeavouring to promulgate. The author's views on this subject I hold, in the present state of science, to be especially sound and philosophical; and I hope that this work may help to counteract the inconsistent and antiquated doctrines now being taught by one of our government professors respecting the small distinction which exists between the members of the genus *Homo*."

all the variations from the typical *homo* which present themselves to the comparative anthropotomist. We could readily have excused what Professor Owen has, in this respect, left undone, if what he has done had been moderately well-done. Unfortunately for the student of man, this is unmistakably the weakest part of the whole work. We cannot help thinking that we should have been able to look upon Professor Owen with still greater pride, had he been content to have restricted his statement of human characters to those of man in the abstract. It would certainly be detrimental to any inferior reputation to state that "most well-formed skulls of educated whites present the characteristics ascribed by Blumenbach to his Caucasian race." What is a "well-formed" skull? one which is seemly to the eye, as that of Blumenbach's Jewess, or one which best subserves its purpose as a brain case. Again are none "educated" who have ill-formed skulls, Wordsworth, for example, or Talleyrand; or are we to think that Professor Owen is so far gone in developmental phrenology as to believe that education converts badly formed into well-formed skulls? For our own part, we consider that the distinction which Professor Owen makes between the skull of the educated and that of the uneducated as such is purely mythical.

A young collector of skulls cannot do better than take counsel with Prof. Owen, who is no doubt prepared to tell him where he can obtain every variety with the greatest ease, for he informs us generally that "from an old and well-filled European graveyard may be selected specimens of 'klinocephalic' (slope or saddle-skull), 'conocephalic' (cone-skull), 'brachycephalic' (short skull), 'dolichocephalic' (long skull) 'platycephalic' (flat skull), 'leptocephalic' (slim skull), and other forms of cranium equally worthy of penta- or hexa-syllabic Greek epithets." A great deal of Prof. Owen's treatment of the subject is so crude that craniologists will scarcely feel a pang at his playful scorn of their classification. No one has vindicated more resolutely than Prof. Owen himself, both by precept and example, the use of polysyllabic Greek in scientific needs; from his lips, therefore, the conclusion of the preceding extract is a commendation. In confirming by his authority the popular notion contained in the above passage, the author would fain persuade us that no character which exists in variation in one race, can be used in the discrimination of allied races. Has Prof. Owen forgotten his own indignation at those who doubt the zoological value of the brain characters of man, because they exist more or less in various apes? In that case he held, and properly held, that it is the comparative concentration of a character producing greater or less intensity and persistency which renders it valuable to the classifier,—and this is exactly the case with

racial head-forms. Indeed, with a strange inconsistency, the author himself, when speaking of cranial capacity, applies this principle to man : he says,—

“The uneducated African, like the uneducated European, has a minor cranial capacity than the educated African or European ; but this becomes a race-character only when, as in the Australians and Tasmanians, all are sunk in barbarism, or none risen above that oldest known state of man.”

Knowing the meagreness of the statistics hitherto published respecting the comparative capacity of the cranium in the different European and African races, we are overjoyed to learn that others exist, as we presume from the confidence of the above statement they must exist, so complete as to show the average difference between the educated and uneducated of those races. Considering that Professor Owen's work has been published now nearly two years, it is high time that researches so important were public property. We are especially curious to know what has been taken as the criterion of education. The three R's., or a Government Science Examination, might be tests applicable to Europe, but what about Africa? we beg pardon for forgetfulness,—*there* the cranial walls are expanded by the Church Catechism.

In his anxiety to level up craniological distinctions, Prof. Owen has committed himself to an argument which we should scarcely have expected from so accomplished a naturalist. He says, “The observed range of ethnic variety in the configuration of the human skull and proportions of its parts, is much more limited than in domesticated breeds of lower mammals, *e. g.*, the canine races.” That we may not mistake his meaning, he adds, “There is no osteological or dental difference of specific value.” We have neither reason nor desire to dispute the former of these assertions ; we would merely point out its antagonism to the author's purpose. If Prof. Owen were a Darwinian, the *petitio principii* involved in the assumption, that all dogs are of one species, would be natural. We can scarcely think that this is Prof. Owen's opinion ; if it be, it is assuredly in opposition to that of the great majority of naturalists of his own school,—those, namely, who do not interpret facts by hypotheses. If our idea of species be based on that of permanence, many well-marked sections of the genus *Canis* have a far better right to specific discrimination than hundreds of other species, both of animals and vegetables. Were the statement intended merely to restrain the ardour of the craniologist for minutiae, it might pass unnoticed ; but meant, as it is, to emasculate their zeal altogether, it lays itself open to objection. The author should have at the same time reminded us that, on the

other hand, there are numerous genera many of whose species possess skulls quite as like one to another as are those of mankind. We would ask whether the skulls of the lion and the tiger, whose distinctive characters Prof. Owen was the first to discover, are more or as much unlike as are those of the Australian and the average European.

Professor Owen is of opinion that there is a connection of sequence between uniformity of habits, uniformity of mental power, and uniformity of cranial characters.

"But whilst the characters brought out by this comparison are pretty constant in the Australian race, they are far from being so in the European; and this difference depends on the comparatively low intelligence and sameness in the mode of life of the savage as compared with the state of civilised man."

Again,—

"Where much uniformity of manner of life and of degree of mental power prevails, as, *e.g.*, in the Lapps and the Esquimaux, a certain constancy of cranial character is associated therewith: where difference of work and of social grade creeps in, then cranial characters become inconstant."

We can hardly bring ourselves to believe that this mode of accounting for cranial diversity can be satisfactory to the author himself. Thorough going monogenists are often compelled by their necessities to shake hands with the transmutationists, but Professor Owen knows the value of Mr. Darwin's hypothesis too well to adopt it to this extent. Granting that the habits of the Australian and other savages are uniform, what, we may ask, has produced these modes of life? Intellect forms the external life—why, then, should not that of the Australian have modified the circumstances of his life to the same degree as that of his successors in the same country is now doing?

We are sorry to see Professor Owen, of all men, adopting the antiquated absurdity which appears in the following sentence. Speaking of Polynesian skulls, he says, "Prognathism is still the most constant feature in them, concomitant, perhaps, with late weaning of the infant." Had the author been describing external features, he would, probably, have been tempted to attribute the Negro nose, as of old, to concussion on the mother's back; or, if in an original frame of mind, the Negro lip to the osculant propensities of the race. On a monumental work like the present, a flaw such as this is thrice ugly.

Many of our readers will be interested to learn Professor Owen's views as to the cause and effect of premature obliteration of the structures. We, therefore, give his valuable note upon the subject in full:—

"Rokitanski appears first to have conceived, in relation to the skull

of a young person in which the lower ends, for rather more than an inch, of the coronal suture were obliterated, that it was the cause of a transverse contraction of the cranium at that part.

"What this skull actually shows is the coincidence of partial confluence of parietals and frontals with a least transverse diameter at the temporal fossa, a high and rather short cranium, with a general inferior capacity of the brain-case. But the relation of the cause and effect in this instance is not reasoned out by the great pathologist. The ultimate or adult size of the cerebrum is due to inherent, or inherited, capacity or brain-development, with the accident of such culture, or of the absence thereof, through which that development might be influenced. The growth of the brain governs the capacity of the cranium, and, in a general way, is anterior in the order of the phenomena; it influences its bony case, moreover, not by mechanical expansion, but by exciting the modelling action of the absorbents in co-operation with the arterial depositors of the bony matter. The coronal, sagittal, and lambdoidal sutures are, as a rule, and in the cranium in question, too intricately interwoven to admit of any forcible drawing asunder. On what fact it is assumed that the obliteration of the parts named of the coronal suture caused or conditioned ('bedingt') the transverse contraction of the cranial cavity is not stated. If the mechanical idea prevailed that the obliteration of a suture prevented the previously distinct bones being pulled apart, so as to allow, or stimulate, disproportionate growth at the margins of the stretched bones, then we should have expected that the elongation of the cranial box would have been prevented in the direction at right angles to the obliterated suture, producing contraction in the longitudinal instead of in the transverse direction."

Our judgment on the anthropological part of the work, as a whole, is that, although well conceived, it is badly executed, and, in its present form, is not likely to exercise that amount of influence which it ought. This is to be regretted, for such a book is much needed for the large class of rising students of human and comparative anatomy and physiology.

In conclusion, however, we would observe that we are prepared to forgive minor faults in execution, when we perceive what a truly scientific spirit breathes in the author's ultimate conclusions; and, at the same time, we would express our hope that he may be spared to produce a second edition of his work entirely worthy of his own great name. An author who writes thus in these days ought to be forgiven many sins, both of omission and commission.

"The most intelligible idea of homologous parts in such series, is that they are due to inheritance. How inherited, or what may be the manner of operation of the secondary cause in the production of species, remains in the hypothetical state, exemplified by the guessendeavourers of Lamarck, Darwin, Wallace, and others.

"In the lapse of ages, hypothetically invoked for the mutation of

specific distinctions, I would remark, that man is not likely to preserve his, longer than contemporary species theirs. Seeing the great variety of influences to which he is subject, the present characters of the human kind are likely to be sooner changed than those of lower existing species. And with such change of specific character, especially if it should be in the ascensive direction, there might be associated powers of penetrating the problems of zoology, so far transcending those of our present condition as to be equivalent to a different and higher phase of intellectual action, resulting in what might be termed another species of zoological science.

"With the present physical and structural characteristics of the human species, it may be reasonably concluded that those of other existing species, especially of the distinctly marked vertebrate classes, will be at least concurrent and co-enduring, and in that sense we may accept the dictum of the French zoologist, '*La stabilité des espèces est une condition nécessaire à l'existence de la science d'histoire naturelle*'. At the same time, indulging with Lamarck in hypothetical views of transmutative and selective influences during æras transcending the periods allotted to the existence of ourselves and our contemporaries, as we now are, we may also say, '*La nature n'offre que des individus qui se succèdent les uns aux autres par voie de génération, et qui proviennent les uns des autres. Les espèces parmi eux ne sont que relatives, et ne le sont que temporairement.*'"

WAKE'S CHAPTERS ON MAN.*

We have much pleasure in directing attention to this little volume, for, of late recruits to the ranks of anthropological penmen, its author will, we hope, prove not the least valuable. We will not flatter Mr. Wake with the expectation that a new era of anthropology will date from the appearance of his book; nevertheless, it is easy to descry in it a vein of ore, wherefrom future wealth may be reduced. A logical intellect, a clear style, and a philosophical indifference to vulgar hobgoblins whenever he sees them, are the qualifications of the maiden writer; and men so gifted are apt to educate themselves and others very completely. If they possess the additional virtue of industry in research, their influence upon scientific truth will, sooner or later, demand recognition.

That the present work will be thought unobjectionable by the ma-

* *Chapters on Man.* By Charles Staniland Wake, F.A.S.L. London: Trübner and Co., 1868.

jority of readers, we cannot venture to affirm. It has a very wide sweep, and consequently brings its author into collision with a goodly number of suppositions past reconciliation with his own. Contradiction, possibly not always the most polite, must, in these days, be expected by every one bold enough to dispute opinions which seem to be spreading over the scientific mind, like mould upon cheese; and Mr. Wake is, no doubt, prepared to encounter the anger of all upon whose toes he treads. This is a species of quarrel which we must leave him to settle with the advocates of rival hypotheses; but there are some objections which it is our own duty to make in a friendly way. Not only is the design of the work extensive,—perhaps too extensive for its mode of execution,—but its materials are heterogeneous. In a march of 320 pages, or thereabouts, its author strides over an extent of ground reaching from the *Amorphosoa* to *Freewill*. In the midst of capitular disquisitions on comparative psychology, metaphysics, species and varieties in man, and other topics more or less connected, we find a space, nearly equivalent to a moiety of the work, occupied with the origin and antiquity of man. Perhaps, by the end of the century, some of these subjects, which now appear incongruous, may be so far credited with established principles and mutual relations, as to be tabulated in the contents of anthropological manuals; for the present, they are too debatable and too incoherent to be associated in the parentage of any great doctrine respecting man's appearance on the earth, or disappearance into space. The author himself does not seem to be aware of any connexion between the origin of man and the rest of his chapters; and for our own part, we cannot but think that he would have secured a heartier reception for his book had he confined himself to one compact subject,—either of those, which engage his attention, would have been worthy of his powers.

Perhaps the desultoriness observable must be attributed to the fact that the work is the result of an amplification of independent memoirs. One of these, intended, in the words of the titlepage, to sketch the outlines of Comparative Psychology, competed for the Godard Prize, at the disposal of the Anthropological Society of Paris. We cannot altogether concur in the judgment pronounced upon its value as a scientific investigation, as the award of that distinction. It may be said that the comparative intellectuality of the lower animals is, strictly speaking, a branch of zoological inquiry; but the boundary between zoology and human biology is too obscure to debar the anthropologist from deriving from the comparative method whatever information may be obtainable respecting the mental phenomena of man; his efforts are, indeed, the more necessary inasmuch as the subject is almost neglected or, at least, very inconsequently studied

by professed zoologists. If, however, the objection of the judges appointed by the Paris Society referred not so much to the noöology of man and brute, as to the hypothetical addendum implied in the term Psychology: it may be remembered that even this is a matter which divides the opinion of anthropologists, and, as it influences the judgment most arbitrarily where it is understood most superficially, we are inclined to think that Mr. Wake's essay on its credibility will tend to advance science, whether the result be satisfactory to himself or not.

It can hardly be doubted that many important problems in the zoonomy of man depend, for their solution, upon accurate views of the extent and nature of his community with the brutes. The interest attaching to the study of homologies, appropriated hitherto by the structural anatomist, is becoming more catholicised as other characters of the total animal and its life-conditions engage attention. Any step in this direction, carefully taken, must carry our knowledge onwards. Mr. Wake has therefore, in our opinion, profited the science of man not a little by his identification of the intellectual functions displayed in the highest and in lower forms of life. It is true that the identity is traced only up to a certain point; but so far it is the result of nothing less legitimate than observation. The fact that similar though inferior mental powers exist below man, is found to be approved by our senses. We bid adieu to that trusty dragonian, and are introduced to Psychology Proper, when our author essays to explain the source of mental inferiority.

"Of the lower animals, then, it may be observed that they possess all those modes of activity, which are usually termed the faculties of the soul—namely, feeling, understanding, and will" (p. 52).

"It is to the possession, then, of the soul essence, or *psyche*, we must refer the phenomena of animal life" (p. 63).

But the psychologist is not content with this result of his labours, an animal soul, great as it is. The superiority of the human intellect is so vast, and that vastness is so indubitably one of kind and not of degree, that a mere *psyche* is evidently (to those on terms of intimacy with it) incapable of conferring it. Mr. Wake is, therefore, in common with all who venture on such ground, driven to illustrate, unintentionally, no doubt, the inexpediency of departing from Goethe's advice and introducing spiritualism into a scientific treatise. He quietly takes it for granted that man is specially characterised by the possession of a *pneuma*, or spirit of reflection; and assures us that it is this which endows him with a peculiar faculty of multiplying and modifying the nature of the objects of his thoughts,—the lower animals, bereft of this principle, cannot rise to the conception of general

ideas. That we may not misrepresent the author's views he shall speak for himself :—

"The principle of being on which man's superior mental development depends is the spirit of reflection, or simply—as distinguished from the soul essence, or psyche—the spirit, or pneuma. It is by the activity of such an additional spiritual agent we can alone account for the superior phenomena of the human mental life. Founded, as these phenomena are, in the simple sensational perceptions which the lower animals also possess, we see in them the gradual development of a perception so different in its objects as to be necessarily due to the activity of a superior principle of being. . . . Having no such external principle of spiritual activity, the lower animals can never obtain any knowledge of the (their) soul's intuitions, or of those general truths which are the expression of them in relation to external nature" (p. 69).

Again, in his *résumé*, Mr. Wake says :—

"It is in the possession of the soul essence, or psyche, which shows its presence in the several phases of mental activity, we recognise the psychical unity which exists throughout the whole animal kingdom. But as the progression from instinctive to rational action is due to an increase in the number of thought objects, so the change from simple reasoning to the higher reason which distinguishes man is due to a change in the *nature* of those objects. The latter change is the result of the exercise of the faculty of spiritual perception which gives a knowledge of qualities as distinct from the objects in which they inhere, this perception being the source of all man's civilisation. The principle to which the faculty of higher perception belongs is the spirit, or *pneuma*, the activity of which gives a knowledge of the intuitions or first principles of the soul's activity. The spirit or *pneuma* has an operation analogous to that of the bodily eye, and may, therefore, be termed the soul's spiritual eye or the faculty of reflection, but as being the instrument of man's highest knowledge, it is the true principle of spiritual life" (p. 73).

If it were not inconsistent with due impartiality to dispute the premises, it would not be difficult to point out the unsatisfactory nature of Mr. Wake's arguments against the existence of a power of generalisation in the brute intellect, a supposed defect which is made the foundation of the whole pneumatic superstructure. But this is a question which must be left to the intelligent reader. In the interest of science, however, we must protest against the demand made upon our faith in behalf of "the spirit of reflection," in so far as it is put forward without concomitant proof, as though it were a self-assertive truth. The whole arch of Mr. Wake's order of architecture is keyed together with a dogma :—till it be consolidated with better reason, science will show a proper respect for its own safety if it declines to sit within range of its *débris*.

In the chapter on matter and spirit we have to suffer a similar dis-

appointment. The weakness of the materialistic and of the "development" accounts of animal origin appears to the author to require exposure—his objections are natural, stated with clearness and force, and difficult to ward. We are, therefore, in full expectation of receiving from the hands of the advocate of the psyche and pneuma a far sounder and more substantial explanation. The psyche being the more sensational agent, it will, no doubt, be proved that this "principle of being" was the precursor and originator of the organised matter:—as Aristotle speculated and Stahl reimagined. But our hopes are vain; Mr. Wake only ventures to hint incidentally that such may be the case. "So far," he says, "as positivism is concerned, any of those phenomena [of organisation] may be due to the activity of an immaterial principle, the presence of which may be the *cause* of the complexity of structure that furnishes the special conditions necessary for such phenomena, and which can, perhaps, reveal itself only through matter." Readers who may feel content with this information, but still inquisitive about the origin of the immaterial principle itself, will learn, though not very distinctly, that Mr. Wake is one of those who consider it a continuity from the absolute soul of the universe. "That eternal and infinite existence from which all phenomenal nature has been evolved must, although manifesting his activity through a material organism, yet be essentially a spiritual being, as possessing not only the principle of animal vitality, but also that of spiritual life" (p. 317.)

Attacking with no mean skill the positions taken by evolution and chemico-vital synthesis, Mr. Wake passes their outworks and finds himself confronted with a question whose difficulty is equalled only by its necessity to everyone inquiring into animal origin, the conditions pre-existing the organic cell. It is not surprising that the author's opponents fail to satisfy him as to the nature and rise of those conditions, partly because they concern themselves very little about them, partly because satisfaction of the kind must as yet be derived from beyond the confines of science.

It is, however, some consolation for previous disappointments to find that, on this point at least, the author has apparently been able to satisfy himself. It is true that it is by another supposition; but we are here breathing an atmosphere of hypotheses, and one, more or less, will not be unbearable, though it is certainly one which tries our powers of endurance in no slight degree.

"Supposing that these specific organised forms are accompanied by peculiar arrangement of their chemical elements which take the form of 'physiological units,' the tendency of the primitive organic matter to take this arrangement has to be accounted for, and it can only be by its dependence on some still more ultimate fact. . . . The only ex-

planation that can be given of this tendency is that *the primitive form of matter is the organic.*"

It may be doubted whether italics were necessary to impress so startling a proposition on the mind of the reader; it is still more dubitable whether the idea of a "more ultimate" complexity pre-existing simplicity will find favour with those who do not see the necessity of the assumption on which it is founded; namely, that "inorganic matter, although the starting point of the evolution of the relative, is unknown to the being of the absolute." A revelation with which, we regret to say, we have not been favoured.

But Mr. Wake's ground of quarrel with development does not extend far beyond the evolution of the organic out of the inorganic. It is true he refuses to entertain the notion that animals have been naturally selected out of vegetables, and is emphatic in his condemnation of the exaggerated consequences deduced from the anatomy of man and ape; but he admits that,—

"If this hypothesis (of Darwin's followers) were restricted to the development of each of the several kingdoms of organic nature out of an original prototype, its truth need not affect the theory of man's [three-fold] nature enforced in the preceding pages. Any degree of change in *form* within the limits of the great divisions of nature may be allowed, so long as their *substantial* distinction is admitted. The Darwinian hypothesis, therefore, requires consideration only so far as it affects to derive man equally with both the animal and vegetable kingdoms from a common and single progenitor" (p. 296).

The insuperable objection in the author's mind to this climax of Darwinism is the supraaddition in the case of man of a spiritual principle of being. We are curious to know more of the natural history of this principle. By what process its separation from the parent stock is or was primarily effected; and what determines its necessary affection for organic matter? What differentiations, if any, it has in race or sex? We are especially desirous of being enlightened upon a point of considerable importance, whether its union with matter first produced a human cell or a full-grown savage; perhaps, however, as we have to accompany our author into an ethereal sphere in search of our principle, it is fitting that, in respect to matters like these, we should be left *in nubibus*.

A little flirtation with that fascinating damsel Development was, with Mr. Wake, very conducive to his interests as well as pleasure, since it was necessary that she should smile upon his efforts to expound the origin of man; for, have not all men, whatever their discrepancies, spread from one great centre, granting, perhaps, two or three subordinate centres? Do not the varying races of Africa, Southern Asia, and Polynesia especially testify to a common original?

Are not the signs of community given by language and custom preferable to the indications of diversity yielded by the same sources, *plus* structural differentiations? With great industry, and we must add ability, the author serves up all the facts suitable to the monogenistic palate. Readers who do not believe in transmutation processes will, no doubt, reject as inconsequent the affirmation which the facts are made to yield. Since the ark struck upon the rocks of geology, the upholders of radiation have been not slightly perplexed when required to define the habitat of the primæval pair. John Hunter thought that it must have been in some Negro-growing land, as man appeared to him to have been originally black. Asia Minor has, of course, retained some of the reputation of its red earth. Australia has, of late, put in a claim for primevity. This knotty point must now be considered to be judicially settled. In the present work the various tracks converging to the primitive centre are followed in so profound a manner, that the centre itself is ultimately found at the bottom of the Indian Ocean. Accepting the convenient hypothesis of certain geologists, that within the Tertiary period a great continent occupied the place of the waters now washing the shores of Africa, Asia, and America, all difficulty vanishes; the primal seat was within that semi-circumference, and development has done the rest. Polygenists will be awe-stricken by a hypothesis which merely requires the confirmation of its facts, ethnological and geological, and the acceptance of its rationale, to establish its truth; if they are solaced by the concession of a few secondary centres, let them not presume upon the grace, for, clearly the process which has changed the original type into an Australian, a Negro, a Deccan, or Andean form, is sufficient to produce a Greek or an Esquimaux. We cannot accompany Mr. Wake into the detail of his argument, but one of his confirmatory proofs of a submerged centre is too ingenious to be passed unheeded. Three or four thousand years ago, a yesterday compared with the author's estimate of human time, a Chaldæan offshoot wrote down a mythical notion current among them, that the primitive seat of the race, eastward in Eden, was at the common *source* of the four great rivers Tigris, Euphrates, Indus, and Nile. It is obvious that the first three of these would, if continued at their mouths, meet somewhere in the Arabian Sea. The Hebrew tradition, therefore, confirms science; for it is only necessary to suppose that these rivers have been thrown into convulsions and turned end for end, to enable us to see that their common drainage was where Paradise ought to be by hypothesis; while their embouchures were—goodness knows where. The Nile, however, appears to have declined obedience to this “right about face,” and, shifting its quarters into Africa, continues to run northward with becoming independence of character.

We do not wish to be considered unduly severe on the author of *Chapters on Man*, but notions such as these are really blemishes from every point of view. Should the work enjoy the good fortune we wish it, and reach a second edition, it would be wisdom in Mr. Wake to subject it to a careful revision. An admission of its faults is a gain to ourselves, for we now feel at liberty to praise its merits. We commend it to our readers as a suggestive inquiry into many interesting and difficult questions. There is in it much that will be of service to those engaged in similar studies, whether their opinions harmonise with those of the author or not. It bears the impress of an earnest thoughtful brain, laborious in the collection and skilful in the use of all the facts friendly to its objects. In the copious vocabularies appended to the volume, the general reader has an opportunity of estimating the value of this branch of investigation, and it is scarcely possible for him to have accepted the author's guidance so far without having added to passing interest much material for reflection.

Anthropological News.

ANTHROPOLOGY AND THE BRITISH ASSOCIATION.—We feel sure that it will give great satisfaction to our readers to learn that the engagements which were entered into last year at Dundee, respecting the anomalous position of the Science of Man in the British Association, have been carried out in a manner which leaves no ground of complaint for any party. Ethnology has been removed from Section E, and will now be united with the Anthropological department of Section D. We trust that this second meeting of such department will be a success. Geography retains sole possession of Section E.

THE ANTHROPOLOGICAL AND ETHNOLOGICAL SOCIETIES.—We learn from a letter in the *Pall Mall Gazette*, that Sir Roderick Murchison has been trying to effect a union between these two societies; but we are sorry also to learn, from good authority, that the zealous Trustee of British Science has himself been the means of preventing a union, by his objection to the use of a scientifically exact title for such a united society.

CAPT. BURTON is, we believe, expected in England in July or August.

CONSUL HUTCHINSON has just arrived, bringing a large collection of skulls for the museum of the Anthropological Society.

MR. RALPH TATE, who accompanied Dr. Carter Blake to Nicaragua, has also just returned.

THE INTERNATIONAL CONGRESS OF ARCHAIC ANTHROPOLOGY; or *Congrès International d'Anthropologie et d'Archéologie Préhistoriques*, will be held at Norwich on the 20th of August. The Committee have published the following list of subjects, falling especially within the province of the Congress:—

1. The earliest traces of the existence of Man.
2. Researches in Caverns

inhabited at a remote period by Man. 3. The structural character of Primeval Man. 4. The Character of the Fauna associated with him. 5. Megalithic Monuments. 6. Stone and Bronze Antiquities, their character and uses. 7. Earliest use of Iron in Britain. 8. Early habitations. 9. Intrenchments, and Implements of War. 10. Early methods of Interment. 11. Existing Customs and Implements as illustrations of Prehistoric times. 12. Indications of continuous progress in Arts and Civilisation during successive Prehistoric Periods.

OUR READERS will, we feel sure, be pleased to learn that there is a prospect of Professor Huxley relinquishing some of his self-imposed duties,—such as the prosecution of Governor Eyre,—in order to be able to devote his energies to that portion of the Science of Man which is comprised under the word *Ethnology*. We trust that although Professor Huxley has defined *Ethnology* to be the Science of “Man-fancying”, he will succeed in giving the public a higher conception of the meaning of the word.

AN ARTICLE appears in the current number (July) of a monthly periodical, entitled *Human Nature*, from the pen of Mr. John Davidson, F.A.S.L., of Dundee, on the “Origin and Progress of the Anthropological Society of Dundee.” To those who are interested in the progress which Anthropology is gradually making in all classes of Society, we would especially commend this account of the most recently formed Anthropological Society.

ETHNOLOGICAL SOCIETY.—Professor Huxley, we are pleased to hear, has become President of this Society. It is hinted that, under the new management, the society is likely to become little more than a sort of Darwinian Club. Much as we shall regret this, we hail it, however, as a sign of real progress, that the society is to be presided over by one who has never yet been guilty of pandering to popular prejudice, although he is, we believe, occasionally frightened by scientific demons.

ELECTION OF ANTHROPOLOGISTS INTO THE ROYAL SOCIETY.—We are very pleased to be able to announce that Dr. J. Barnard Davis, Vice-President of the Anthropological Society of London, has been elected a F.R.S. Amongst the other successful candidates, we observe the names of two other Fellows of the society: Mr. W. S. W. Vaux (a member of the Council of the same society), and Dr. P. Martin Duncan one of the Secretaries of the Geological Society.

WE regret to have to record the death of Rajah Sir James Brooke, a zealous and much respected Fellow of the Anthropological, and many other learned Societies.

DEATH OF MR. JOHN CRAWFURD, HON. F.A.S.L.—This distinguished Oriental scholar and anthropologist died, on Monday, May 11, at his residence in Elvaston Place, South Kensington. He was born on the 13th of August, 1783, in the Island of Islay. His father, Mr. Samuel Crawford, a man of sense and prudence, was of an Ayrshire family. He had been brought up to the medical profession; and, visiting Islay, married Margaret Campbell, daughter of James Campbell, of Ballinalley, the proprietor of a small estate which had been for several generations in the family. Their son John was educated in the village school of Bowmore, and to the instruction derived from the master, Daniel Taylor, Mr. Crawford used to say he was chiefly indebted for his advancement in life. In 1799, the profession of medicine, for which he never had much taste, having been chosen for him, Mr. Crawford

repaired for his studies to Edinburgh, where he remained three years. In 1803, he obtained a medical appointment in the Indian Service, embarked for India in April, and landed in Calcutta in September of the same year. For the first five years of his residence in India, he was employed in his professional duties with the army, chiefly in the north-west provinces, in the neighbourhood of Delhi and Agra. In 1808, the same duties took him to Penang, in the Straits of Malacca, where he began to devote himself to that study of the languages and manners of the Malay race which was destined to make him widely known. In 1811, having been brought under the notice of Lord Minto, then Governor-General of India, Mr. Crawford was invited to accompany him on the expedition which effected the conquest of Java. After that event, in consequence of his acquaintance with the Malay languages, he was appointed to represent the British Government at the court of one of the native princes, and for nearly six years he filled some of the principal diplomatic offices of the island. It was then that he collected the materials for the work which he afterwards published, entitled *The History of the Indian Archipelago*. Java, and their other Indian possessions, having been restored to the Dutch, Mr. Crawford returned to England in 1817, and in 1820 published the work just mentioned. In 1821, he went back to India, and shortly after his return, was appointed by the first Marquis of Hastings, at that time Governor-General, to the Diplomatic Mission to Siam and Cochin-China. In 1823, Mr. John Adam, *ad interim* Governor-General, appointed him to administer the new settlement of Singapore, on the resignation of its founder, Sir Stamford Raffles. In that position he remained three years, and concluded with the native chiefs, to whom the settlement belonged, the convention by which we hold its sovereignty. In 1826, he returned to Bengal, and was forthwith appointed by the Governor-General, Lord Amherst, Commissioner in Pegu, and eventually, on the conclusion of peace, Envoy to the Burmese Court. In 1827, Mr. Crawford finally returned to England, and in the following year published an account of his mission to Siam and Cochin-China, and in 1829 another of his mission to Burmah. After this period, long leisure, good health, and an inclination to study and capacity for work, enabled him to keep up and perfect his stores of Indian and Eastern information. He was an indefatigable contributor to the press on matters relating to the East, and indeed on many other subjects. In 1852, he published a grammar and dictionary of the Malay languages; and in 1856, a descriptive dictionary of Malay and the languages of the Philippine Archipelago, works which secured for their author the respect of the philological world.

THREE ANTHROPOLOGICAL WONDERS.—Sir: There is now on view in Fleet Street a remarkable specimen of an albino woman of the name of Cameron. She is fresh and healthy-looking in complexion, with pale, purple-coloured eyes, with a pink ring round the iris. Her hair, about twenty inches long, is combed out loose, and resembles a white mop of Angola goat's wool, and is very silky, with a splendid lustre. It is wonderfully beautiful in itself, but looks strange in its present position. It is extremely thick, and differs from the silver hair of old persons in entirely wanting the yellow or gray tinge. There is almost an entire want of pigment in the hair. I was in the habit of seeing near Bristol a youth of seventeen, assistant to a baker. He was a very good specimen of an albino. He avoided the daylight by keeping a shade over his eyes; his skin was of a chalky whiteness, and his

hair was silver gray. He was admitted into the Bristol Infirmary, where it was clearly proved that the pigment was wanting in the eye by its being subjected to the influence of atropine. It is somewhat curious that albinos, although found occasionally amongst most races, are commonest among the negroes, the greatest contrast to them in colour. With the albino woman there is a Scotch giant, of whom the dimensions are said to be as follows: Height, 6ft. 8in.; weight, 38 stone; 63in. round the chest; 79in. round the waist; 42in. round the thigh; 28in. round the calf; 24in. round the muscle of the arm. His bare arms were shown, which exceeded in thickness those of any man I ever saw. He was a healthy and good-natured looking man, and would have been a fitting partner for Miss Heenan, "the great American prize lady," who was on view at the same place a few weeks ago, and who was without exception the stoutest and most substantial-looking lady I ever saw. Judging from her, it would be unfair to say that the Yankee ladies were falling off, but perhaps on this ground they were anxious to do her honour, for according to the handbill she had been presented with a handsome cup, value one thousand dollars, by the ladies of New York; the great prize cup from the baby show in America, as well as a handsome silver cup from the late President Lincoln. The most robust English ladies would look small beside Miss Heenan, who is said to weigh forty stone, to be 26 inches round the muscle of the arm, 3ft. 6in. across the shoulders, and 7ft. round the body, and all this at the early age of nineteen. What will she weigh when she is "fat, fair, and forty?"—C. O. G. NAPIER, *Land and Water*, May 23, 1868.

THE ANTHROPOLOGICAL SOCIETY OF MANCHESTER.—At the last meeting of this Society, at the Royal Institution, Mr. G. Harris, president, in the chair, the Secretary read a report upon the International Archaic Anthropological Congress which will be held at Norwich, under the presidency of Sir John Lubbock, Bart., F.R.S., on Thursday, the 20th August. It was very desirable that the Manchester Society should be represented upon this occasion; and it was therefore decided that the Council should have authority to send a delegation to take part in the business of the Congress, and report at the ensuing session.—A donation was received from M. Quatrefages, a memoir on the Microcephales, or Men-apes. It was further announced that at the conclusion of the present meeting the session would terminate, and be adjourned to Monday, 28th September, when a paper would be read "On Foreign Missions in connection with Civilisation and Anthropology," especially including the following points:—1. The capacity of the negro for civilisation and Christianity. 2. The actual success attendant on missionary efforts. 3. The relapse into heathenism of alleged converts. 4. The character and conduct of missionaries in relation to the success of missionary efforts. The paper will be printed for circulation on the 1st of August, to enable gentlemen who will take part in the discussion to be fully prepared for the author's statements.—A paper was read by Mr. Henry De Laspe  , entitled, "The Education of Man."—In the discussion, Mr. Devis remarked that the author of the paper had apparently made it a special study of his life to experiment upon the combination of elements called man, with a view to discover the principle upon which it could be moulded and fashioned to any required pattern. It was the perfection of the development theory if this could be done to any like the extent experienced or expected to be realised by Mr. De Laspe  , and he did not place any confidence in the pro-

bability of the principle sought for being discovered. Man, in his human elements and faculties, was, in a sense, perfect, like all the rest of the species of the organic world; but this was not granting that each man was perfect, or even capable of being made perfect up to a given standard. Our knowledge of the races of mankind was decidedly against any such broad assumption. The precept of "doing to others as we would they should do to us," quoted as a Christian duty, was, we should find, originally contained in the Chinese code of morals, by its great philosopher, Confucius, in exactly the same words, long before the Christian era. The questions of educating the whole bodily and mental faculties, as advocated by the author, upon sound principles of a knowledge of man, had been well argued; and it was evident that Mr. De Laspeé had great enthusiasm in carrying out his system.—Dr. Lund said he regretted that the experiment which the author had proposed to the Council on Education, had not been permitted to have been made, as it would really be of some use to society to learn the possibility of applying a system of education capable of producing the remarkable results alluded to in the paper. Hitherto the result of experience had not given any hope of lasting or permanent impressions being produced by the education of idiots. It was found that to a limited extent it was possible to get the idiot to imitate and repeat a good deal of learning by training and discipline; but that the memory was most uncertain and capricious, and really the learning had no qualities of permanence about it at all. The idiot might be said to be incapable of more than erratic wanderings into the regions of mind, from which, by a gap or bend in the road, he would suddenly return to childhood. It was possible to do much for the body of the imbecile, and even the social position might be advanced by careful training to habits of order and obedience; but the mind and memory did not yield so readily to systematic education as had been stated.—In replying to the remarks, Mr. De Laspeé related several curious instances of his successful training of abnormal individuals, none more so than a youth from New Zealand, but of Scotch parents, that was under his care. He was imbecile, had a hirsute skin, and possessed a caudal member. The skull was deficient as well. By careful attention to the principles of development of the body and mind, his mental faculties grew clear, his skin free from hair, and the other ape-like appendage fell off; and at present the youth is clever and vigorous in mind and body. He believed in the pliability of man to the well-directed training of both mind and body. It was possible to make great singers, painters, physicians, and engineers out of unpromising materials, by a proper combination of the elements.—This concluded the proceedings of the session.

We hear with pleasure that it is contemplated to again revive Mr. Luke Burke's *Ethnological Journal*. It failed in 1848 and again in 1865, but we trust that the third venture will be more successful. We shall do our best to encourage it, especially as it will receive the support of ladies and other friends of Ethnological science. Mr. Luke Burke has our hearty congratulations on the encouragement he is at last likely to receive from his admirers.

RAPPORT SUR LES PROGRES DE L'ANTHROPOLOGIE.—Par M. A. De Quatrefages. (Paris, 1867, 1 vol., royal 8vo., pp. 570), is the title of a handsome book, written by the Professor of Anthropology at the Jardin des Plantes, as one of a series of reports on the progress of letters and of the sciences in France, prepared on occasion of the Exposition of 1867. It is mainly com-

posed of the materials used in the Professor's lectures, and of the facts and opinions elicited by the Société d'Anthropologie de Paris, and embodied in its "bulletins" and "memoires." Besides which, it contains an immensity of information respecting the history and the state of anthropology in France, and the opinions of its chief cultivators. Those who regard the science as having advanced out of its tutelary stage in which it existed when Blumenbach, Prichard, and Lawrence wrote, and as having proceeded to a real scientific foundation by the investigations of more modern writers, this report of progress will appear as a remarkable phenomenon, in fact, as a progression backwards. For it is in reality less of report than an elaborate and very able attempt to carry back anthropology to Monogenism. This attempt is by an accomplished naturalist, and is based upon zoological arguments and proofs. Generally speaking, it is frank and modest, not always cautious; still, it does not exhibit the former qualities so strongly as the candid Prichard exhibited them. The author is an advocate from the beginning to the end of his volume. Nevertheless, the work may be read with instruction by those who have finally abandoned the doctrine Professor de Quatrefages labours to establish. The author has the merit of repudiating Darwinism and developmentalism, which is a point of great weight from so eminent a zoologist; but, at the same time, he advocates the unity of origin of all the most diversified kinds of men. This is an apparent solecism, like that of progress by going backwards to the views of a past age, some of whose advocates lived long enough to repudiate them. The book, written by so elegant and lucid a pen, will live in the literature of the science.

BROCA ON THE RELATIVE PROPORTIONS OF THE LIMBS IN THE NEGRO AND THE EUROPEAN.—M. Broca has recently extracted from the bulletins of the Anthropological Society of Paris (2nd Ser., t. 2) his valuable memoir on this subject, and issued it in a separate form. The following are the results of his investigations:—1st. The length of the upper member compared with that of the lower is *less* in the Negro than in the European. 2nd. The length of the humerus compared with that of the femur, or with that of the whole lower limb, is also *less* in the Negro. 3rd. The length of the humerus compared with that of the radius is *much less* in the Negro than in the White. 4th. The greater length of the Negro radius compared with that of the humerus is due partially, but not entirely, to the *shortness* of the latter bone—it is longer than in the European, even when compared with the Negro leg. The upper limb of the Negro, therefore, presents two opposite characters. In the superior length of the radius there is an approximation to the simian type, while in the comparative shortness of the humerus the Negro is further removed from the apes than is the European. M. Broca finds the same inconstancy of excess and defect in other races. The Hot-tentot, for example, whom he considers to rank below the Negro, has a length of pectoral limb much nearer to that of the European. These facts are, in M. Broca's opinion, incompatible with the theory of Monogenistic development.

DR. MOFFAT, of Hawarden, is about to be presented with a testimonial in acknowledgment of his services to meteorology and hygienic science; and especially for his important services respecting the influence of ozone in certain conditions of the atmosphere, and its influence upon epidemic disease.

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ON THE LOCALISATION OF THE FUNCTIONS OF THE
BRAIN WITH SPECIAL REFERENCE TO THE
FACULTY OF LANGUAGE.

By JAMES HUNT, Ph.D., F.S.A., F.R.S.L., F.A.S.L.; Pres. of the Anthropol. Soc. of London; Hon. For. Sec. of the Roy. Soc. of Lit. Great Britain; Doctor of Med., *Honoris causâ* (1867), of the Univ. of Giessen; Hon. Fellow of the Ethnol. Soc. of Lond.; Mem. of Imp. Dresden Acad.; For. Assoc. of the Anthropol. Soc. of Paris; Cor. Mem. of the Soc. Anthropol. Española; Hon. Mem. of the Soc. des Amis de la Nat. of Moscow, Geog. Soc. Dresden, Soc. Parisienne d'Archéol. et d'Hist., and Cor. Mem. of the Med. Assoc. of Hesse Darmstadt, Upper Hesse Nat. Hist. Soc., Congrès International d'Anthropologie, et d'Archæologie préhistoriques, etc., etc., etc.

THE aim of modern science is most undoubtedly to unite branches of inquiry which have long been unnaturally separated. The most apt illustration of this tendency towards union between different branches of science, is the fusion which has recently taken place of the anatomist, physiologist, pathologist, psychologist, and physiognomist, into one homogeneous body. Long separated into different and frequently hostile camps, they have now united, leaving, we trust, all their squabbles and prejudices behind them. The good old word Anthropology is the banner under which this most desirable amalgamation has been effected. Not only, however, has there been a union of different branches of science, but we have had, at the same time, a junction of two opposite methods of scientific inquiry. The method of the modern anthropologist is neither purely inductive nor purely deductive. It unites in itself, as all genuine progressive science must do, both methods. The science of Anthropology rests on no narrow basis; its conclusions are not derived from any one branch of science. It leaves out nothing which is necessary to form a real science of man and mankind. Herein lies its power; and here, also, was doubtless the cause why it was so vehemently assailed when it

first began to arouse the intellectual faculties of the races of Western Europe. The union of the anatomist, physiologist, pathologist, psychologist, and physiognomist, with the archæologist and ethnographer, has been effected amongst the *savants* of France, and is gradually being effected amongst their *confrères* in England, Germany, and America. If a method had been required to render the conclusions of Man-science unsatisfactory, none better could have been found than by separating the different branches of one science. This scientific revolution, by which a union of these sciences has been effected, is not confined to Europe, but is showing itself in nearly every part of the globe where science is at all studied. It is instinctively felt by the isolated students of different branches of the science of Anthropology, that only one desideratum to give their conclusions the weight and value they deserve is wanting, viz., a comparison of observations with other branches of the same science.

The subject of the present series of articles will serve as an illustration of the value of the union recently effected between the physiologist, pathologist, psychologist, and physiognomist. It will be seen that these are all names for parts of one and the same science—the science of human nature, now universally admitted to be properly designated by the word Anthropology. I shall have to draw illustrations for my subject-matter from each of these sciences. Why is it that psychology proper remains where it was two thousand years ago? Solely because she was too proud or too ignorant to call in aid of the physiologist and the pathologist. So, too, the nearly hopeless and chaotic condition into which the discoveries of Dr. F. Gall respecting organology have fallen is the result of, in the first place, insufficient foundation, and in the second, dogmatic teaching. Happily, most of the leading psychologists of Europe have seen and admitted the value of a union with the physiologist and pathologist. The discussions on the localisation of cerebral action before the Paris Anthropological Society, have inaugurated a new era in science—an era which cannot but have the most beneficial result; and it is most desirable that a similar era should be hastened in this country.

I shall not now stay to inquire whether physiology, pathology, physiognomy, or psychology, has contributed most to elucidate the subject of the localisation of the functions of the brain. I readily admit that each has contributed its fair quota, but most strongly insist that they are only rendered valuable when united into one science. It is only by surveying the rise and progress of our present knowledge, that we can really ascertain how far we are making an advance. While elated with satisfaction at our present progress, it behoves us well to remember how slow is the growth of all inductive

sciences ; at the same time, we cannot fail to observe how rapidly science advances when a true method has been obtained, and when we are able to shake off the yoke of traditional errors, against which, unfortunately, men of science have continually to struggle.

The contempt which scientific men now generally entertain for philosophy, is due, in a great measure, to the arrogant assumptions of a school whose disciples have not yet learnt that the age of speculative thought is passed, and that the present time is pre-eminently an age of science. The occupation of the dreaming theorist is gone, never, we trust, to return.

In the sequel, I shall have to touch on many points in mental science, such as Memory and Consciousness. These subjects appear, at first sight, to have but slight connection with the localisation of the faculty of Language, and yet it is necessary that we should comprehend what is meant by memory and other mental phenomena. Language is indeed only another word for thought; and without memory there could be no thought nor language.*

On this point I shall have to dwell at some length when I come to the most important question of a classification of the various forms of loss or defects of voice, articulation, speech, and language, which are associated with affections of the brain and the nervous system.

I need not now dilate on the vast importance of the subject in hand. Most cordially do I agree with Dr. Hughlings Jackson, when he says, "that to settle the position of one faculty, and especially of one so important as that of articulate language, will be a vast advance in physiological and psychological science."†

The many valuable works published on this subject, both in England, on the Continent, and in America, have hitherto mostly been considered from a purely pathological stand-point. My own treatment of the subject will be distinct in its method and aim from that of any other which has hitherto been attempted.

I have elsewhere,‡ some ten years ago, alluded to the researches of Dr. Bouillaud and M. Aequiel on certain morbid affections of the brain, and their influence on speech. M. Bouillaud at that time held that morbid affections of the anterior lobes of the brain alone affected speech ; while M. Aequiel contended that disorganisation of nearly any portion of the brain has the same effect. At that date, however, the subject of the localisation of the faculty of language, as a pathological

* I here use the word *language* in its widest sense, almost synonymous with *expression*.

† *London Hospital Report*, vol. i, p. 464.

‡ *Philosophy of Voice and Speech*, 1859, p. 322. A second edition of this work is now passing through the press.

question, was not ripe for discussion. From a physiological or a physiognomical stand-point, the question remained much in the same state as it was left by Gall.

Ten years ago, there were comparatively few physiological writers who had given in their adherence to the doctrine of organology. I then alluded to the curious, if not remarkable fact, that such a distinguished physiologist as the late Sir B. Brodie, had, in his *Psychological Enquiries*, announced his grave suspicions that there was in the brain a special organ of speech. Brodie quoted two cases of young children who were unable to speak, although the intellectual faculties were seemingly perfect; and he thought himself both justified and compelled to assume the existence in the brain of a special organ for speech. This was the more extraordinary, inasmuch as Brodie had long been an avowed opponent of both Gall's organology and craniotomy.

During the last few years, however, the aspect of the whole question has been changed. The localisation of the functions of the brain is not only one of the questions, but is, with many anthropologists, the most important question of the day.

For some years it has been my good fortune to be in intimate correspondence with one of the most accomplished of French anthropologists; one who takes equal rank as an anatomist, physiologist, or pathologist. I allude to my distinguished colleague Dr. Paul Broca, who, in 1861, revived, by some important observations, the discussion of this subject. It is at the urgent solicitation of this distinguished *savant*, that I have consented to write on a subject at once so difficult and complicated. There are, however, other reasons why I should take a deep interest in this question. I not only look upon the localisation of the functions of the brain as a most important question from a scientific point of view, but this subject has also attractions of a purely practical nature. I purpose now, however, to confine myself, as far as possible, to the bearings of this question on what is called Mental Science, or perhaps, more correctly, the science of Cephalonomy.

The functions of the brain, like the laws regulating the action of the larynx in the production of vocal sounds, are to be discovered only by means of physiology combined with pathology. Physiology and pathology are, indeed, but two branches of essentially the same science. My object is to ascertain the truth respecting brain functions, and not to dispute which line of inquiry has yielded, or is likely to yield, the most satisfactory data.

The localisation in the brain of any mental faculty, if once proved, will become the foundation on which mental science will have to

be constructed. Let the ultimate decision be what it may, every anthropologist cannot but take a deep interest in a question on which hinge such important consequences. Physiognomy has not yet become a science; it now only consists of shrewd guess-work, and its professors do, perhaps, the cause of scientific inquiry as much harm as good. Physio-anthropology is, however, most undoubtedly the great science of the future. Should the mental faculties be localised in different parts of the brain, and should the practical physiognomist be able to discern their relative sites, then, and not till then, shall we become free from the assumptions of past and present ages, and have a solid foundation, on which we may confidently base a real science of Man. This subject requires students and not professors. Each student must look back to the past for such light as he can obtain, and this cannot fail to assist him in his future observations and reflections.

In attempting to give anything like an historical summary of the theories promulgated concerning the relations of the human body and mental phenomena to the localisation of the functions of the brain, it is necessary to go back at least three thousand years. This announcement need not, however, cause alarm. Many centuries will not occupy as many lines; whilst four or five centuries will, from want of material, be entirely passed over.

First of all, a few words on the Psychology of the Bible. Many learned works have been written on this subject; and if I cite only one, *The System of Biblical Psychology*, by Prof. Delitzsch,* of Erlangen, it is because I fully agree in what he says in his preface, that the psychology of the Scriptures need not feel ashamed in the presence of modern psychology. In saying I agree with him in this respect, it may hardly be necessary to state that I mean *pure* psychology.

In the psychology of the Bible, we meet with the tripartition of the soul, or a *trinitas mentis*, which pervades not only Greek, but, to some extent, modern psychology. Thus, the *ruach*, *nephesh*, *neshama* (breath of life), *leb*, spirit, soul, heart, represent the Hellenic *nous*, *logos*, *cardia*. The heart plays in Biblical, as well as in most heathen psychological systems, the chief part. There is, however this difference, that, in the Old Testament the heart is not merely looked upon as the most important vital organ, but as the organ of thought, volition, and as the seat of all emotions. The head and the brain scarcely find a place in the Old Testament. According to Delitzsch, the head, as the seat of the intellect, occurs only in *Daniel*:—"The dream and the visions of my head are these;" "Daniel had a dream and vision of his head;" "and the visions of my head troubled me."

* *System der Biblischen Psychologie*, Von F. Delitzsch: Leipzig, 1855; translated into English, and published by Messrs. Clark.

It is quite evident that the doctrines of Pythagoras concerning the soul, form the basis, not merely of the theory of the ancient, but of comparatively recent psychologists. He divides the soul into two portions, the rational soul and the irrational; the former having its seat in the brain, the latter in the heart. But other writers ascribe to Pythagoras the doctrine of a tripartite division of the soul, as we find it in Plato. The division consists in the portion peculiar to man, *phrenes*; the animal portion, *nous*, and *thymos*. Later writers divide the irrational soul into the *thymos*, into the concupiscent, and aversive or irascible portion; the latter having its seat in the liver, the former in the heart. This was, we believe, the first attempt to localise the mental functions in different parts of the body.

Hippocrates,* the celebrated founder of therapeutics, the immediate predecessor of Plato as an author, considers, in his treatise of the glands, the brain as a gland. "The head," he says, "has glands; the brain itself resembles a gland. It is white, it is separated in small masses, like other glands. It possesses the same advantages. . . . The brain is large, and lodged in the cranium, where it occupies much space. . . . When the brain is irritated, consciousness is lost, the brain becomes convulsed, and involves the whole body. Man can no longer speak. He becomes suffocated and falls into a condition called apoplexy."

Again, in his work on epilepsy, we find the following remarkable passages as regards the functions of the brain, showing that he deemed it the seat of all the mental phenomena:—"It is necessary to know that man has only pleasure, gaiety, laughter, by the brain. From the same part come also pain, trouble, and inflections. By this part we are wise, intelligent, we see, and hear, and discern what is good and bad, what is agreeable or disagreeable. . . . It is by the brain that we fall into delirium and insanity, that we feel terror and fear by day or in the night, by dreams or errors of all kinds."

This, it will be admitted, is pretty strong language in favour of the brain being the seat of the so-called "mind;" but it is neutralised by another strong passage in his book on the heart. "The human mind is placed by nature in the left ventricle, whence it governs the rest of the soul." It may, however, be stated that the treatises *De Glandulis* and *De Corde* are attributed to the son or son-in-law of Hippocrates, and there are doubts whether Hippocrates is the author of the treatise *De Morbo Sacro*.

Plato distinguished in man what is corporeal and mortal from the soul, which he considers an eternal and self-acting energy, acting upon the human body, which is only its passive subject. In its connection

* Born 460 B.C.

with the body, he distinguishes, in two parts, the rational soul, created by the Supreme God, and which is immortal, and the irrational, formed by the generated gods (the demons). But as the mortal cannot combine with the divine, there is required a *tertium quid*, a sort of middle term which connects them; this is the *thymos*. The rational soul, he contends, has its seat in the brain; the irrational, or vegetative soul, which needs food for its preservation, has its seat between the diaphragm and the navel; the irascible soul or the spirit (the intermediate link between the mortal and the immortal soul, *θυμος**), has its seat in the heart. The liver, in which the thoughts issuing from the brain are, so to speak, reflected as in a mirror, is the seat of the faculty of prophesying. The spleen, which is closely connected with the liver, is a sort of reservoir of the impurities of the blood.

According to Aristoteles, the soul is the entelecheia of organic bodies. In plants, the soul works as a preserving and nourishing energy (*anima vegetativa*), as the plant has no other functions than nutrition and propagation. In animals, the soul becomes sensitive (*anima sensitiva*), whilst the human soul is, at the same time, vegetative, sensitive, and cognitive (*anima rationalis*). Man thus being the end of nature, exhibiting, in himself, the various steps of development in nature. But as all consciousness ceases with death, the soul has, after death, no personal existence; but the entelecheia exists only as a divine absolute force, which, combining again with an animated human body, renders it a rational man, but who has no recollection of a former existence.

Aristotle further says that the brain is a compound of water and earth; that it is the most bloodless substance of the body; that it produces no sensation when touched, and that, being extremely cold, it moderates the heat of the heart. When the brain becomes too moist or too dry, it either does not refrigerate the heart or congeal the humour. He places the sensitive mind in the heart.

Mr. G. H. Lewes says,† “Instead of conceiving life as one of the manifestations of mind, Aristotle taught the precise obverse, namely, that mind is only the highest development of life.”

For many centuries the teaching of Aristotle was accepted as that most in accordance with Christian doctrines. Whether this be so or not, it is equally certain that the tendency of all modern inquiry and research is to again bring us back to this doctrine. Sensation, motion,

* *Θυμος* is differently rendered by translators, owing to the word conveying different meanings. Thus Schleiermacher renders it *Eifer* or *Muth*, zeal or courage; others translate it *heart* or *spirit*. In fact, under *Thymos* Plato comprises all the active mental faculties tending towards the formation of rational ideas.

† Aristotle, *A Chapter from the History of Science*, p. 225, 1864.

consciousness, and intellect, are now generally held to be in strict accordance with the development of nerve tissue and its consequent nervous force.

Mr. Lewes thinks, to use his own words,* that "there are one or two passages which raise a doubt as to whether Aristotle had made this point clear to himself in the sense in which it is held by the most advanced psychologists; indeed, it is evident that he had but imperfectly appreciated the necessary correlation between an ascending complexity of organisation and an ascending complexity in vital phenomena, since he had not clearly and steadily mastered the fundamental relation between organ and function. Nevertheless, if he sometimes stopped midway, if he wavered in his conception of the relation between organ and function, the majority of moderns, even physiologists, have not been less wavering, and he stands at the point of view now generally occupied by the most advanced thinkers."

Erasistratus and Herophilus deserve a passing notice, as the founders of cerebral anatomy and physiology, and as the greatest ornaments of the celebrated Alexandrian School. We only speak here of Erasistratus as a cephalotomist, and his researches into the structure and functions of the nervous system. At first he believed that the nerves sprung from the *dura mater*, but on closer examination he discovered that they sprung from the substance of the brain. He moreover studied the convolutions and the ventricles of the human brain, and described and compared them to the brain of animals. Erasistratus assumed two kinds of spirits in the human body: the vital air, *pneuma zooticon*, resident in the heart, and soul, *pneuma psychicon*, resident in the brain. Some later authors also say that he distinguished between nerves of sense and of motion, and that he had a knowledge of the circulation of the blood.

Herophilus was probably a few years older than Erasistratus, and equally, if not more illustrious, than his contemporary. It is certain that he and Erasistratus dissected human bodies. Celsus says that Herophilus dissected the bodies of criminals alive, as is said of the anatomists of the sixteenth century. The most important discoveries of Herophilus relate to the functions of the nervous system. He considered the nerves as organs of sensation. That some nerves were subject to the will, and that these arose from the brain and spinal cord. He carefully dissected the brain, and the confluence of the occipital sinuses is still called *torcular Herophili*. He assumed four fundamental life forces: the nourishing (situated in the liver), the heating (heart), thinking (brain), feeling (nerves). In this respect he seems to follow Aristotle. So great was his reputation

* Vide p. 224.

that a great anatomist of comparatively modern times considered him infallible.

Galen was intimately acquainted with all the discoveries of his predecessors. He examined all the nerves, both as regards their origin and their termination. Thus he followed up the *vagus* to the lungs and the stomach, and made experiments on animals to prove the importance of that nerve in the production of the voice. He not only was very near describing the circulation of the blood (Hecker, Berl. 1811), but also very near the discovery of Sir Charles Bell in distinguishing the sensitive from the motive nerves. Galen derives from the brain all nerves for sensation, and from the spinal cord all motor nerves. Some nerves become, in their progress, motor nerves.

The organs of the rational soul are the brain and the nerves. The vital spirit, *pneuma zooticon*, has its seat in the heart and the arteries, and the natural spirit, the *pneuma physicon*, in the liver and the veins. The heart he, therefore, considered as the seat of courage and wrath, the liver as the seat of love. He rejects the opinion of Aristotle that the brain was subservient to the cooling of the natural heat of the heart.

As regards the mental functions, they are performed by means of the *pneuma*, which is prepared from the vital spirit, and is carried to the brain with the blood. Hence it is comprehensible how the soul changes with the body, and how all ideas and representations of the mind are merely the result of the disposition of the body.

Some place the chief part of the soul (what the Greeks call *ἡγεμονικόν*;) in the heart; others in the membranes of the brain; others in the brain itself. Hence they all differ as regards the special use of these parts.

One passage more, to show that Galen considered the brain as the organ of intelligence, must suffice.

The brain, as regards its substance, resembles that of the nerves, of which it is the organ, only that it is softer. This is as it should be, for it receives all sensation, all imagination, and conceives all intelligence, and is more easily affected; for what is soft is more easily affected than what is hard.

Avicenna* assumed three kinds of spirits in the body: the natural, the vital, and the animal. Each of these is produced from the vapour of the blood. He also assumed nine animal faculties; five of which corresponded to the number of the external senses from which the mind receives its sensations. He establishes one faculty which sets the muscles and the limbs into motion, and three other faculties which preside over the imagination, memory, and reasoning. Roger Bacon was, to a great extent, a follower of Avicenna.

* See J. Conr. Barchusen, *Historia Medicinæ*, Amst. 1710.

Albertus Magnus looked upon the *sensus communis* as partly a particular sense which receives the forms of sensual objects, and partly as the common fundamental sense, the point of union of the sensations (consciousness). The mere capacity to receive impressions and forms of sensible objects is passive. The active power is distinguished in memory, imagination, and poetical force, which depend upon an internal spiritual organ. Albert assigns different spots in the brain as the seats of the above faculties. The *sensus communis* is situated in the brain, where the five senses terminate in a centre, and thus form an organ common to them all. Behind it is situated the faculty of imagination. Poetry has its place in the most central ventricle, and if this portion of the brain is injured, mania and rage are the result. Albert denied the world-soul, and the emanation of the soul from God. The soul is a simple, indivisible, unchangeable substance, which contains the principle of different faculties. The connecting medium of soul and body was the most imperfect part of the soul, and the most perfect of the body.

The revival of anatomy may be said to have commenced, at the beginning of the fourteenth century, with Luigi Mondini de Luzzi (*Mundinus* or *Mundinius*). Mondini's father was an apothecary at Bologna, probably the birth-place of Mondini; but in what year is not certain. We find him Professor at Bologna in 1314. In 1315, he publicly dissected two female bodies; and not long after published a treatise on anatomy, which became a text-book in the medical schools for nearly three centuries; for, at the end of the sixteenth century, it was the only text-book used in the University of Padua. This compendium (*anathomia*) was probably the first anatomical treatise illustrated by woodcuts; and was held in such esteem, that deviations from his descriptions were considered abnormal. As to the work itself, every page shows that the author, even after personal inspection, cannot escape from preconceived opinions and theories.

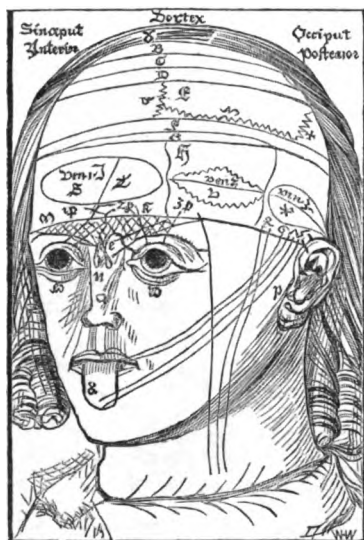
The first edition bears the title, *Anothomia* (sic) *Mundini præstantissimorum doctorum, &c.* Impressa Papaia, 1478, per Magistrum A. de Carcano. This edition has no woodcuts. The illustration here



given is taken from the tract of Mundini published by Johann Ketham, in his work entitled, *Fasciculus Medicinæ compositus per excellentissimum artium ac medicine doctorem joānem de Kethem Allamanus. Venetiis, 1495.*

This work is remarkable for its excellent woodcuts, considering the period, and is generally held to be the first work illustrated by anatomical plates. One of the tables represents Mundinus lecturing in an anatomical theatre, surrounded by anxious students. A dead body lies on the table ready to be dissected.

Hundt (*Magnus canis*), born at Magdeburg (hence he is also called *Parthenopolitanus*) in 1449, studied at Leipzig, and became Rector of that University. He then took the degree of Doctor of Medicine, and subsequently that of Doctor of Theology, and became prebendary of the cathedral of Meissen, where he died in 1519.



Hundt* was one of the last famous Leipzig scholastics. He was equally distinguished for the extent of his knowledge as for his private character, and was the author of numerous works on grammar, philosophy, the canon law, and some of which were published.

The chief work of Hundt, which, even at present, is not without

* The anonymous author of a work, *Centuria Scriptorum Insignium*, etc., (ed. a Joach. J. Madero, Helmst., 1660, 4to, enumerates a great many of Hundt's writings.

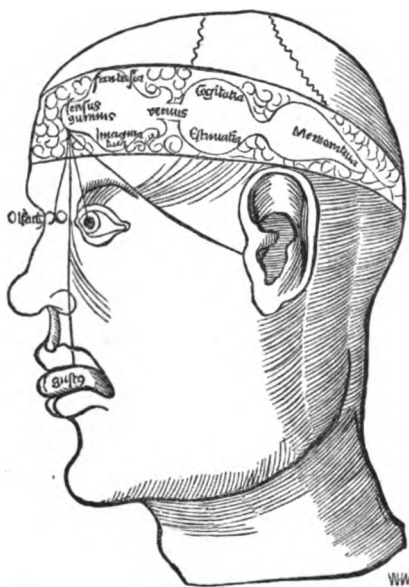
interest, both on account of its having given an impulse to the study of anthropotomy, and because of its being one of the first books published with anatomical woodcuts, bears the following imposing title, which we give at length :—"Anthropologium de hominis dignitate natura et proprietatibus, de elementis, partibus et membris corporis, de juramentis, nocumentis, accidentibus, vitiis, remediis, et physionomia ipsorum, de excrementis et exeuntibus, de spiritu humano ejusque natura, partibus et operibus, de anima et ipsiis appendiciis. Per Magnum Hundt Parthenopolitanum. Ingenuarum artium Magistrum in gymnasio Liptzensi. Ad laudem Dei et communem studiosorum hominem utilitatem quam accuratissime ex philosophorum congestum. Impr. Liptzick per Baccal. Wolf. Monacensem 1501. 4to." There is no doubt that Hundt was one of the first authors of modern Europe who used the word anthropology; and this will be sufficient to cause him to be gratefully remembered by the future historian of anthropological science.



George Reusch, also called Gregorio Reisch, or Gregorius Rischius Carthusianus, was born about 1470-80, at Balingen, in Würtemberg. He subsequently became prior of the Carthusian convent at Freyburg, in Bresgau, and enjoyed great authority under Emperor Maximilian I, whose father confessor he was, and at whose death he was present.

The celebrated Dr. Johann Eck, the most violent opponent of the Reformation, went to Freyburg to study mathematics under Reisch.

It is singular that Reisch is scarcely mentioned in any of the biographical dictionaries, nor in encyclopædias; yet he must have been one of the most learned men of his time. His chief work, *Margarita Philosophica*, although consisting of only one volume, is a cyclopædia in miniature; and was, in fact, published later under the title of *Encyclopædia*, and one of the first books published under that name. This rare work is, as far as we know, the third anatomical book illustrated by woodcuts. Ketham's *Mundinus*, 1478, Hundt's *Anthropologium*, 1501, *Margarita*, 1503. The edition now before us is of 1508. We give the head, which is almost mapped as a phrenological bust of the



present day. The engraving has been published by several authors, but has always been attributed to Baptista Porta, whose work was not published till 1583. We have not seen it mentioned in Porta that the illustration, which is, in fact, a fac-simile, was taken from the work of Reisch. Ludovico Dolci published this figure in his *Dialogues*, in 1562, but the engraving is somewhat reduced, and the tongue is out. There is little or nothing to be learnt from these works besides what we learn from the engravings themselves. *Margarita* says the number of internal senses are five: common sense, imagination, estimation,

phantasia, or imagination and memory. The common sense is in the first portion of the anterior ventricle, as is also the power of imagination. In the middle ventricle is the estimativa, and in the posterior, the memorativa. The word *vermis* (worm) will probably puzzle many modern anatomists, if not scholars. As used by Mundinus, it means the worm-like passage between the anterior and the middle ventricle, so that the spirits may pass from one ventricle to the rest. In Dolci's figure the following explanation is given. Hortensius (in the usual dialogue form) says, as the teacher, "You see in this figure where is the common-sense, where is the imagination, where the estimative power, where the power of memory, and also where is smell and taste." Fabricius (the pupil) answers, "I see all this remarkably well, and everything is put in its proper place."

J. Baptista Porta was born at Naples about 1550. He was, to judge from his numerous works, a most erudite physiognomist, deeply read in the works of his predecessors. His chief book, *De Humana Physiognomia*, published in 1586, has been translated into many different modern languages. He closely follows Aristotle and Avicenna, and considers that the human face should be compared with that of animals. No part of the human body is passed over. The woodcut representing the human head, with the distribution of the mental faculties, is, as already stated, without acknowledgment, taken from the *Margarita Philosophica* of Reusch.

Andreas Vesalius was one of the first who tried to shake off the yoke of Galen. He was a pupil of the celebrated Sylvius, who afterwards became his violent opponent, and described him as a mad reformer, because he dissented from Galen. His greatest work (*immortale opus*, Haller), is his *De Humani corporis fabrica libri VII.* Basil, 1542." Burggraefe (*Etudes sur Vesale*) says, "Vesalius has not enriched anatomy, he has created it." This is doubtless an exaggeration; but there is no doubt that the anatomical illustrations of Vesalius' works, drawn by great artists,—probably by Johann von Kalcker, a pupil of Titian, if not by Titian himself—some say also by Michael Angelo—have been copied in almost all the anatomical works of the sixteenth century.

Of his physiology of the brain, we may merely mention that Vesalius well distinguished the grey or cortical substance from the medullary substance; he described the ventricles more correctly, denied that smell had its seat in the anterior cornu of the ventricle. He endeavoured to establish that the use of the ventricles was chiefly to act as reservoirs for the animal spirits. He described the choroid plexus, the septum lucidum, and the fornix.

Although the knowledge of the structure of the brain, and the dis-

tribution of the nerves greatly advanced, the old theory of Galen still prevailed, that the animal spirits were secreted in the ventricles, and that the blood, intermixed with vital spirits, was, through the gyri of the brain, poured into these ventricles for the production of the animal spirits.

Chanet says* : "The first internal faculty to which the species are carried by the spirits is called *sens commun*. This *sensus communis* does not mean what is vulgarly called common sense, natural sense, natural logic, as opposed to artificial logic as taught in the schools. Thus, we say a man is a sensible man, which is synonymous with a clear-sighted, a reasonable, or rational man. The school-men, following Aristotle, say that *sensus communis* is the centre, where all the reports of the external senses are carried to."

Speaking of imagination, he says :—

"The images being brought by the spirits (nerves) to the interior ventricle of the brain, excite the faculty which here resides. It is called imagination because it receives and discerns the images of all external senses. It is for her that memory preserves the images, to give them back to her for making new representations. The Greeks called it *phantasia*. Aristotle derives this term from a word signifying light : light standing in the highest relation with the sensitive soul, which resides in the brain. Imagination, some say, is the action of the imaginative faculty. This faculty is, properly, what people call *esprit*, or, as the Romans called it, *ingenium*. As the mind can have no new *sensation* but by the intermediation of the senses, which originally is due to the motion of certain fibres, its *reproduction* by the imagination depends still on the motion of the same fibres.

"All accidents which affect the body may weaken and destroy the imagination and the memory. Both have, therefore, their seat in the body.

"The sensory fibres are so constructed, that a more or less continuous action upon them by objects produce more or less durable determinations, which constitute the *phynic* of memory.

"The condition of the fibres upon which an object has acted is no longer the same as it was before ; but the fibres have been modified. It is impossible to say in what this modification consists. The tenacity of memory depends on the special disposition of the elements to retain the determinations imprinted upon them. An intelligence fully acquainted with the whole mechanism of the brain could read it like a book. The prodigious number of minute organs appropriated to sensations and thoughts would be, for such an intelligence, what, for us, are printed characters. We turn over the leaves of books ; we study them. The aforesaid intelligence would merely contemplate the brains.

"I say nothing of *traces* and *delineations* in the brain which are so

* *Traité de l'esprit de l'homme*, par le Sieur Chanet, Paris, 1649.

gratuitously assumed when the question is of memory. I confess I can form no idea of this, and consider it, therefore, more philosophical to admit that the same organs which, acted upon by objects, yield so diversified perceptions, are so constructed that their constituent parts receive from the action of objects such modifications, whence results a tendency to move in a certain direction from habit."

Imagination, he contends, resides in the fore-part of the brain. He gives a variety of reasons, the chief being that, after a strong effort of the imagination, we feel a lassitude, and considerable heat in the forehead. He, however, cautions his readers not to think that the imagination resides in an indivisible point of the brain, or is attached to a single spot, but its locality is more extended. "*Anatomy*," he observes, "*shows that the brain is composed of a number of small organs, we see dispersed in different parts of the brain, though we may not know the use of these different parts.*" The date of this, it is well to remember, is 1649, or a century and a-half before the time of Gall. Our author then proceeds to the organ of *memory*. He is afraid that he may be accused of using improper terms in attributing an organ to memory, which has no action, and is, properly speaking, no faculty. Be that as it may, it has a passive instrument, a particular portion of the brain where the species are arrested and fixed.

"I hold," he says, "with the common opinion that this part is the cerebellum. The proofs are, certainly, not so very strong in favour of this theory as I should wish. Still, they seem probable and must be accepted. I find them contradicted only by one surgeon, who boasts of having removed the cerebellum without any disorder of the intellect intervening. But this surgeon seems to belong to that class of vain-glorious operators who brag of having removed large organs when they have only removed a few atoms. If he had simply said that memory had not suffered, I might have believed him; but to say that no faculty whatever was damaged, is to say that nature made an organ of no use. I believe, on the other hand, an author worthy of belief, who states that he found the cerebellum absent in a man who, during life, had little or no memory. What a marvellous composition must have, then, that organ which is the direct instrument of our mental operations! What would be our delight if the mechanism of this masterpiece of the Omnipotent were displayed before our eyes! We should behold in this organ a little world; and if it belonged to a Leibnitz, this little world would be the abstract of a universe."*

* The celebrated Hooke, on the supposition that an idea may be formed in twenty tierces of time, found that a man would, in one hundred years, collect 9,467,280,000 ideas, or vestiges; and if we were to reduce this sum to one-third on account of sleep, there would still remain 3,155,760,000 ideas; and supposing that there are two pounds of medulla in the brain, one grain of this medulla would have 205,452 vestiges (*Phys.*, Haller, t. v, lib. xvii, § vi). Much more wonderful would it appear when the vestiges, of which Hooke speaks, only reside in a very minute portion of the brain, and not in a considerable mass of this viscus. We might as easily apply it to one grain of this mass. Our imagination cannot seize such objects.

These views of Chanut, more than two centuries old, are both interesting and important. They illustrate the truth of the maxim, that "there is nothing new under the sun;" and demonstrate, if any such proof were needed, that the theory of the localisation of the functions of the brain is not a new discovery. It is, however, of less importance to the student of science to know whether it be new provided it be true.

There is a manifest disadvantage in treating a subject like the present in detached portions. Although, however, it has its drawbacks, it is really at present the only practical way of at all successfully treating the subject in hand. The question of the localisation of brain function is growing from day to day; for no sooner is a work published giving the latest results, than it seems out of date. I purpose, in this series of articles, to give a general sketch of the whole subject, with a digest of the present state of the controversy respecting the localisation of one of the mental faculties; and we shall then be better able to continue to give, from time to time, new facts that may be acquired either for or against this important theory.

[To be continued.]

ON THE MEASUREMENT OF CRANIA.*

By JEFFRIES WYMAN, M.D., Hersey Professor of Anatomy in Harvard College, and Curator of the Peabody Museum of Archaeology and Ethnography; Corresponding Member of the Anthropol. Society of London.

TIEDEMANN appears to have been the first to attempt anything like an extensive comparison of human crania based upon their capacity.† To this end, 1, he weighed the skull without the lower jaw; 2, filled the skull with dried millet seed and weighed again; 3, deducting the weight of the skull he obtained the weight of the millet seed filling it. Thus a means for determining the comparative size of the cranial cavity in different individuals or races was obtained, but it failed to give any exact idea of the volume of the brain. The method proposed by Sir William Hamilton was more successful; he filled the cranium with fine sand which was measured in cubic inches; having determined the weight of a cubic inch of sand, he multiplied this by the

* Extracted from the *Proceedings of the Boston Nat. Hist. Soc.*, vol. xi, 1868.

† *Philos. Trans. of the Royal Society of London*, 1836, p. 497.

number of cubic inches contained in the skull, and making a correction for the difference in the specific gravities of brain and sand, the weight of the brain was approximately reached.* Prof. D. Treadwell has proposed a somewhat similar, but more simple method than this; it consists in determining, by any given method, the capacity of the skull in cubic inches, multiplying this by the weight of a cubic inch of water, and correcting for the difference between the specific gravities of brain and water, we have, as in the other case, cubic contents converted into brain weight.† The method proposed by Prof. Treadwell has an advantage in the fact that the weight of a cubic inch of water (252.5 grains, or 16.4 grams) has been determined with great accuracy, and is a constant quantity; while that of a cubic inch of sand varies according to locality, requiring a fresh determination each time a different kind of sand is used.

The nature of the material used for measuring the capacity of the skull is important, but observers have had recourse to very different kinds. Water would unquestionably be the best, but its use is impracticable owing to the great difficulty in making the cranium sufficiently tight to retain it. The late Dr. Samuel George Morton, having used white mustard seed "on account of its spherical form, its hardness, and the equal size of its grains," afterwards, at the suggestion of Mr. J. S. Phillips, substituted No. 8 shot, which he found to give much more precise results, and with these all the measurements recorded in his tables were made.‡ Sir William Hamilton sharply criticises Dr. Morton's method as "only a clumsy and unsatisfactory imitation of mine," asserting that "pure silicious sand was the best means of accomplishing the purpose, from its suitable ponderosity, incompressibility, equality of weight in all weathers, and tenuity."§ Dr. J. Barnard Davis, whose practical knowledge of the subject makes his opinion worthy of high consideration, also recommends the use of fine sand,|| but instead of measuring he weighs the quantity the skull holds. Having ascertained the cubic measure of an ounce of sand, the whole quantity is readily converted into cubic inches, or, by making a correction for difference in specific gravity, into brain weight. Various other substances, such as peas, flaxseed, rice, &c., have been used. Welcker recommends the grains of husked wheat. For a full account of these and of the different methods of comparing crania, the reader is referred to the valuable and instructive memoir of Dr. J. Aitkin Meigs, on the Mensuration of the Human Skull.¶

* *Lectures on Metaphysics and Logic*. Edinburgh, 1860. Vol i, p. 240.

† *American Journal of Medical Science*, in the account of the last illness of the Hon. Daniel Webster. January, 1853.

‡ *Crania Americana*, p. 253.

§ *Crania Britannica*.

¶ *North American Med.-Chirur. Review*, September, 1861, p. 837.

§ *Op. cit.*, vol. i, 1240.

From the following table, the result of careful comparative experiments, it will be seen that, for exactness, shot are far preferable to sand, and that Sir William Hamilton's criticisms are unjust. The chief requisites for a good material for measuring crania, are lightness and uniformity in the size of the particles or component bodies; the size should be such that they will not escape from the foramina in the orbit, and their shape such that they will occupy the smallest compass with the least amount of shaking or compression. All these conditions were very nearly found in peas, and, with the exception of lightness, were realised in shot, the diameter in the second case being about 0.18 inch, and in the first 0.23 to 0.25 inch. Shot have the advantage over all other materials in their spherical shape, but their weight is such that fragile crania would be destroyed by them, though they may be safely used with those of ordinary strength. A skull having a capacity of ninety cubic inches when filled with shot weighs more than twenty pounds, which is altogether too heavy a mass to handle when many crania are to be examined.

With the view of determining the relative value of different materials, one and the same skull was measured eight times with each of the different kinds mentioned at the head of the columns of the table. The cranium was filled with a given material, which was well shaken down and compressed until no more could be received. The contents were then poured into a measure, care being taken that this should be done in each case at a uniform rate, but *without* being afterwards shaken or pressed down. The measure used was a litre, and the measurements are noted in cubic centimeters.

	Peas.	Shot.	Beans.	Rice	Flaxseed.	Coarse Sand.	Fine Sand.
1	1190	1200	1210	1220	1250	1250	1315
2	1190	1205	1210	1222	1250	1260	1320
3	1190	1205	1210	1220	1240	1250	1290
4	1195	1200	1205	1220	1255	1260	1290
5	1198	1200	1210	1215	1250	1270	1320
6	1190	1200	1200	1220	1250	1250	1290
7	1195	1200	1205	1225	1240	1260	1350
8	1196	1205	1200	1220	1245	1260	1330
Average.	1193	1201.8	1206.2	1220.2	1247.5	1257.5	1313
Range.	8	5	10	10	15	20	60

From this table, it will be seen that the skull being carefully filled in each case, its capacity apparently varied according to the different substances used in the measurement; with peas it was 1193 c. c. and with fine sand 1313 c. c., or 120 c. c. more. This difference depends

upon the fact that the substances used, under similar circumstances, adjust themselves to the least space with different degrees of facility. Shot and peas having a spherical shape, the position in which they happen to fall is a matter of indifference, since all their diameters are equal. The other bodies, whose diameters are unequal, require more or less of shaking and pressure in order that they may be packed in the smallest compass and thus an exaggeration of the capacity avoided. With proper care correct measurements can of course be made with either of the materials mentioned in the table, and in practice no one would omit to shake down and compress the material in the measure to the same degree that he would in the skull. The object of the table is only to show the comparative amount of compression and adjustment required. To present the subject in another way, if a litre is filled with peas, and then shaken, it will diminish one per cent. in bulk, while, under similar circumstances, coarse sand diminishes fifteen per cent. In the first case the error will not exceed one per cent. ; in the second it may be, unless great care is taken, much more. Of the different substances used, peas and shot, on account of their spherical shape, give the best results, and coarse and fine sand the worst, on account of the irregular shape of the grains, the small size of these, for the finer the material the greater the error, and the roughness of their surfaces. As to peas and shot, the last give the most accurate and uniform results, while the ~~latter~~ ^{former}, being less perfect spheres, lead to a slight error, but have the advantage of lightness, thus making manipulation, more easy. Sand has the further disadvantage of filling many angles, canals, and foramina not occupied by brain, and therefore of exaggerating the quantity of this last, and in requiring that the foramina in the orbit should be plugged to prevent its escape. This last objection is of little moment when a single skull is to be measured, but is considerable when the number is large. By using bodies of the size of peas or shot, the inconvenience and the exaggeration are both avoided. The difference in the table between the amount obtained by measuring with peas and shot depends upon difference in the size of the two latter.

There is still another step to be taken, even if an exact measurement of the cranium has been made. The brain, as already stated, does not fill the cranial cavity ; a space, variously estimated, is occupied by the membranes and the vessels, which should be deducted from the general internal capacity. Welcker estimates this at from 11.6 to 14 per cent. of the whole cavity, according as the skull varies in size. Dr. J. Barnard Davis makes a correction of 10 per cent.

Brain, not cranial measurement, is, of course, the object of the study of the capacity of the skull ; but until some definite results are ob-

tained, which will enable the observer to make accurate corrections, we must remain content with cranial measurement for the present, and apply the corrections hereafter.

If we set aside shot as not well adapted to the purpose of measurement on account of their weight, a material suitable for equally accurate measurement is still a desideratum. Peas are not of a uniform size, though by sifting, uniformity may be approached, and there is a certain amount of error growing out of their want of sphericity, though this is quite small. Spheres of porcelain of the size indicated above, and still better of aluminium, on account of its lightness, would give the require qualities for accurate measurement.

The results obtained by various observers in making comparative measurements of crania point to one of the following methods as the most desirable.

- I. *a.* Fill the skull and *weigh* the contained material.
 - b.* Convert weight of material into cubic measurement by determining the cubic measurement of a gram or an ounce of material, and multiplying this by the whole number of grams or ounces. With proper tables, this would be a quick and easy process, but otherwise a tedious one.
 - c.* Convert weight of material into brain weight by correcting for difference in specific gravity.
- II. *a.* Fill the skull and *measure* the contained material.
 - b.* Convert cubic contents into brain weight by multiplying the number of cubic inches by the weight of a cubic inch of water (252.5 grains), or the number of cubic centimeters by the weight of a cubic centimeter of water (one gram), and allowing four per cent. for the difference of the specific gravities of brain and water.

The second has the advantage of being the more simple process, and requires the fewest steps, while the first has the advantage in weighing, which is a somewhat more accurate method than measuring. The weight, however, must be converted into cubic measure, if we compare skulls by their cubic contents. With care, either of them is sufficiently correct, and in his choice the observer can and will be guided by his likings.

ON A CHARACTERISTIC PECULIARITY IN THE FORM OF
THE FEMALE SKULL, AND ITS SIGNIFICANCE
FOR COMPARATIVE ANTHROPOLOGY.*

By Professor ALEXANDER ECKER, Honorary Fellow of the Anthropological
Society of London.

THE influences which, apart from intermixture, effect certain modifications—"disturbances" they might be called—are of various kinds. The most effective are, beside the artificial appliances for the purpose of altering the cranial form, pathological conditions, which give rise to premature synostosis, and thus produce forms which have frequently been mistaken for race-types. But individually, age and sex also modify in various manners the typical form of the cranium, and may, if they accidentally appear before us in a comparatively large number, cover or obliterate the typical form. Of these latter influences the most important, namely, those of sex, have hitherto been overlooked. The differences of the female skull from the male lie partly in the different quality of the osseous surface, and partly in the difference of the absolute, but specially of the relative size of the skull and its parts.

With reference to the first, the female cranium differs from the male by the same characters which distinguish the female skeleton from the male skeleton. First, we notice the lesser development of the processes serving for the attachment of the muscles in the skeleton, and with the development of which they keep pace. The difference is specially perceptible in the mastoid processes, the temporal and cervical line, and the ridges on the lower jaw. We further find that in the male skull the protuberances of the osseous cavities are more developed, as is seen in the superciliary arch produced by the frontal cavities. We may look upon this difference as similar to that greater development of the whole respiratory apparatus in the skeleton of the male, and I therefore agree with C. Vogt,† that the development of the superciliary arch must be considered only as an individual and sexual, and not as a race-character. The comparison of about 100 modern South-German skulls, presented in this respect the most striking differences. That in uncultured races individual differences obtain much less, is well known; and hence, sometimes may easily be taken for a race-character, which, with the progress of individual differen-

* This paper is translated from the *Archiv für Anthropologie*.

† *Vorlesungen ueber den Menschen*, 11.

tiation, is no longer so. Corresponding with the greater approach of the female skull towards the infantile form, the ossification points, the tubera frontalia and parietalia, are, as a rule, more developed in the adult female than in the male.

With regard to the dimensions, it has always been accepted that the female skull is absolutely smaller than the male skull; but accurate information, derived from a great number of measurements, we find, for the first time, in Welcker only.* We find, accordingly, that the horizontal circumference of the female skull to that of the male is $= 96.6 : 100$; the capacity $= 89.7 : 100$. With reference to the proportion of the skull to the rest of the skeleton in both sexes, we possess, to my knowledge, but few data by anatomists. Soemmering† says that in the male body, the head in proportion to the rest of the skeleton, is in weight $= 1 : 8$ or 10 , and in the female, $= 1 : 6$, and that it is, therefore, relatively larger in the female. Accurate measurements are yet wanting; but the statements of artists‡ confirm it, and the entire habitus of the female agrees with it.

But what is more important for our object is the proportion of the cranium to the face as a whole, and that of the separate parts. Anatomical literature contains very little on this subject; and it is only very lately that Welcker has undertaken comparative measurements, and in his work, cited above, has delineated the differences of the male and female skulls by so-called cranial nets. But all peculiarities cannot be expressed in this way, and to show them is the object of this paper, which, it is hoped, will supplement the delineations of Welcker.

The characteristic physiognomy of the female skull consists, apart from the above-mentioned peculiarities of the surface and size, chiefly in the following characters:—

1. In the smallness of the facial parts in comparison to the cranium. That the facial part is smaller, has been already observed by Soemmering§ and Ackermann.|| Welcker points out the small jaws and large orbits. Artists have long noticed this circumstance. According to Schadow, the facial length (from the upper margin

* *Untersuchungen über Bau und Wachsthum des Menschlichen Schädels*, Leipzig: 1862.

† *Vom Hirn und Rückenmark*. Mainz: 1788.

‡ According to Schadow (*Polyclet oder von den Maassen des Menschen*: 1854), the female body has $7\frac{1}{2}$, and the male 8 lengths of the head.

§ *Anatomie*, p. 82.

|| *Ueber die Körperliche Verschiedenheit des Mannes vom Weibe ausser den Geschlechtstheilen*. Coblenz: 1788.

of the orbit to the lower ridge of the chin) amounts in man to 5", in the child $3\frac{1}{2}$ ", in the female $4\frac{1}{2}$ ". The facial oval thereby appears in the female shorter, rounder, more child-like. The female character is in this, as in several other respects, approaching that of a child; woman, in fact, holds an intermediate position between man and child.

2. There is another peculiarity connected with this, to which Welcker has first drawn attention, and which belongs both to the female and the infantile skull, namely, the predominance of the cranial roof over the cranial basis. The proportions are, according to Welcker, as follows:—

(a). The *Linea naso-basilaris* (n. b.) (drawn from the fronto-nasal suture to the anterior edge of the occipital foramen) is to the whole length of the cranial vault in the male = 100 : 404; in the female = 100 : 421. According to my own measurements of a number of well-formed male and female South German skulls, the same line, putting the length of the whole arch = 100, was, in the male 27.1, in the female 26.7.

(b). As regards the transverse circumference of the calvaria, the proportion, according to Welcker, of the basal part of it (*Linea auricularis*, the distance between the edges of the zygomatic processes above the aural apertures) is to the upper part of the transverse circumference (measured with the tape from the above-mentioned point across the cranial arch) in the male = 100 : 245; in the female = 100 : 247.

(c). Finally, according to Welcker, the space between the frontal and parietal protuberances, called by him "the superior cranial square," predominates over the inferior cranial square (between the frontal and zygomatic processes) in women. The first-named space is to the latter in the male = 100 : 92; in the female = 100 : 83.

3. A third and, in my opinion, essential character, and which cannot fail to strike us at first sight, is the lesser height of the cranium. Welcker has also drawn attention to this. According to this author, the length is to the height of the skull in man = 100 : 37.9; in woman = 100 : 70.1.

Weissbach* also looks upon the lesser height of the cranium as characteristic of the female skull. According to my measurements of 25 well-formed male and female crania from the Black Forest,† the height and length index (length = 100) was in the male 83.9; in the female 79.4.

* *Beiträge zur Kenntniss der Schädelformen Oesterreichischer Völker.*—*Medic. Jahrbuch des Oest. Staats*, v. xx : 1864.

† Ecker, *Crania Germanica*, p. 83.

4. This character of the lowness of the cranium becomes the more striking, as it is generally attended by another peculiarity, that of a greater flatness of the roof, especially of the parietal region. I find this character well pronounced in the majority of our modern native skulls, and also in the crania of old Franconian and Alemannic graves.* This difference in the latter appears to me still greater, as the male skulls frequently present a sagittal elevation, which is absent, or but insignificant, in the female skulls.

It might be interesting to ascertain whether in races in whom the sagittal crest is greatly developed, there obtains, in this respect, a difference between the sexes. I am led to think so. We have, in our museum, two skeletons of natives of South Australia, from the district of the Murray river, which I am indebted for to the kindness of a former pupil of Dr. Vogt, in Greenock (South Australia). Both skeletons belonged to young persons apparently of the same age. The cranium of the male presents a well-marked sagittal elevation, which is nearly wanting in the female. This observation is allied to the well-known fact that the female gorilla skull differs from the male by the absence of this crest, and other analogous facts.

5. From this predominance of the cranial roof over the cranial base, there results, among other facts, a form of forehead which is equally, if not more so, seen in the child, namely, a perpendicular position, which, in the latter, passing the perpendicular line, projects on the top. This straight frontal line imparts something noble to the female head; and, according to Camper's facial angle, the cranium of a newborn child occupies a higher rank than that of an adult; and so does, by the same measurement, the female cranium occupy a higher rank than that of the male. But whether this perpendicular frontal profile (which might be called orthometopy) is connected with a perpendicular position of the facial profile (orthognathism) is a different question. At first sight this certainly seems to be the case; to myself, at least, the majority of female skulls appeared to be distinguished by orthognathism. Weissbach also (*loc. cit.*) cites, besides the lesser capacity, the lowness, the smaller facial part, the strongly pronounced orthognathism, as a chief character of the female skull; but the measurements of Welcker (*loc. cit.*) are opposed to these views. According to these the female skull shows a stronger prognathism and a more stretched base (a larger sellar angle) than the male; and placed according to the size of the sellar and nasal angle, the skulls form a different series than when placed according to Camper's facial angle. According to the latter, they form a descending series: child,

* A number of crania marked by Davis and Thurnam (*Cran. Brit.*) as platycephalic, are manifestly female crania.

woman, man ; according to the former, man, woman, child. Welcker himself observes, however, on this point, that the predominance of the calvaria of the female over the cranial base (the absolute and relative shortness of the tribasilar bone), is in contradiction with these measurements, whilst the more stretched structure of that bone is in harmony with them.

6. From the preceding peculiarities, in connection with some others to be mentioned presently, there results, on the whole, a characteristic form, which will be better understood by a glance at the delineations* (fig. 27-35) than by any minute description. The flat vertex seems abruptly to pass into the perpendicular frontal line, so that the transition from forehead to vertex does not form an arch, but a slight angle. In the same way, though less pronounced, the flat vertex passes into the occiput by a kind of angular flexion. This, at least, is perceptible in our brachycephalic skulls, but certainly much less so in dolichocephalic skulls with developed occiput (*e.g.*, the Scandinavian, or old Franconian and Alemannic skulls). I shall designate these angular transitions, the frontal and occipital angles. On comparing with this the profiles of characteristic male heads, we find the higher and arched cranium pass gradually, and in a gentle curve, into the forehead, and also the occiput.

For the better understanding, I give some outlines of well-formed male and female crania. Fig. 27 is the skull of a female, æt. 20, from the neighbourhood of Freiburg, (copy of Tab. vi of my *Crania Germaniæ*). Fig. 28, the skull of a woman, from a Franconian grave near Altlussheim, (*ibid.* Tab. xiii.) Fig. 29, the skull of a well-made man, from the Black Forest, (*ibid.* Tab. xxviii.) Fig. 30, a male skull, from a Franconian grave, (*ibid.* Tab. xxxvii.) I must also refer to Tab. iv, xvi, xxii, and xxvi, in my *Crania Germaniæ*, which all more or less present the described form. There is also a skull of this form delineated in Davis and Thurnam's *Crania Britannica*, Tab. 30 (cran. of an old Roman female). I am inclined to think that the Roman skull, Tab. 36, is that of a female.* Less expressed is the female character in the female skull from an Anglo-Saxon grave of Long Wittenham (Tab. 47). To this belongs also the ♀ skull, Tab. iii, in Thurnam,† from the long barrows of Tilshead, the height and length index of which is only .65, and Thurnam draws particular attention

* We have allowed the references to remain, to enable the student to consult the original edition.

† Fig. 27, female skull (Black Forest); fig. 28, female skull (from Franconian grave).

‡ Thurnam "On the Two Principal Forms of Ancient British and Gaulish Skulls."—*Mem. Anthropol. Soc. of London*, vol. i.

to the flat depressed vertex. In the same treatise, p. 18, there is a drawing of a female skull from the Meudon dolmen.*

The characteristic cranial profile described above may also be seen in living, especially handsome, female heads; and whosoever has once paid attention to these peculiarities, will generally find them. I add, in confirmation of what has been said, in Fig. 31, an outline of the profile of the head, the skull of which is drawn in Fig. 27, in which, compared with the figured female skull, the profile perfectly agrees. We need not be surprised that we do not find this female type equally pronounced in every head, just as little as we find in every male figure the masculine habitus. But that this form occurs so well pronounced in heads which we designate beautiful and womanly, proves that this form is typical for the female sex.

As may be expected, we find the treated-of differences in the male and female skulls as regards the profile rendered by art. The comparison cannot, in the antique heads, be easily instituted, on account of the hair-dress.† On recently visiting the Museum of Antiquities of Carlsruhe, the female cranial type appeared to me well pronounced in some modern plaster works, as in the head of Victoria, by Rauch, Helena, by Canova; the Three Graces, by Germain Pilou; a female head of Sabine Steinbach, &c. But I find that the characters I have dwelt upon are best marked in Flaxman's illustrations to Homer's Iliad and Odyssey, and to the tragedies of Æschylus, based upon an accurate study of the antique. I adjoin some outlines for comparison. Fig. 32, a female head (Æschylus, "The Suppliants," tab. iv); fig. 34, the head of Venus (Iliad, tab. xxxvii); and fig. 35, a male head (Iliad, tab. ii.)‡

On comparing the female cranial profile with the infantile, it is undeniable that they nearly approach each other; and what the proportional theory of artists and the measurements of Welcker teach us, namely, that the female skull in its proportions stands intermediate between the male and infantile skull, is equally correct with reference to the proportion we have treated of. The infantile skull shows the same height and length index as the female, namely, 70·1 (Welcker, *loc. cit.*, p. 67); the angular transition of the flat vertex into the perpendicular forehead is very plainly seen.

The question might, therefore, very properly be raised, whether the

* Fig. 29, male skull (from the Black Forest); fig. 30, male skull (from a Franconian grave).

† The observation of Welcker (*loc. cit.*, p. 66, note 2) I consider perfectly correct; I nevertheless believe that the object of the hairdress in the masculine-looking female crania was to give more elevation to the vertex, rather than the shortening of the longitudinal diameter.

‡ Figs. 32, 33, 34—32 to 34 female profiles; fig. 35, male profile.

female skulls described by me were not all belonging to very young subjects, and that they present that particular form, not because they were female skulls, but because they belonged to young girls. I at first raised that objection myself, but it was soon refuted by the fact that I met this form in skulls of all ages. The female type prevails through the whole life, or, expressed in other terms, the female type arises therefrom, that the infantile type persists beyond the limits of infancy.

That the knowledge of the cranial contour described in this paper, as conditioned by sex, is not without importance in researches of comparative and historical anthropology, can scarcely be contested. I have already, in another place (*Crania Germanice*), expressed a conjecture that probably most of the skulls which induced the Swiss naturalists, His and Rüttimeyer, to establish their *Belair-type*, were female skulls. With reference to other peculiarities of the female skull pointed out by Welcker, I shall not enter upon here, as they have no direct relation to the peculiarity of the cranial contour treated of in this paper.

The anatomical conditions of the female skull to which I wished to draw attention, may be summarised as follows:—

1. The slight elevation of the cranium.
2. The flattening of the vertical region.
3. The perpendicular forehead, the result of the predominance of the cranial roof over the cranial base.
4. The peculiar (No. 6) described form of the cranial contour, a consequence of the peculiarities described in Nos. 2, 3, and 4.

LESLEY'S ORIGIN AND DESTINY OF MAN.*

THIS book, which proceeds from the pen of an American writer, deserves our attention, although the extensive range of subjects it embraces prevents our treating fully of its contents. A difficulty of another kind moreover presents itself. Mr. Lesley's work is entitled "Man's Origin and Destiny," and we naturally expect to find the author's final conclusions embodied in a chapter on Man's *destiny*, as deduced from principles established as to his origin. This chapter,

* *Man's Origin and Destiny*. By T. P. Lesley, Member of the National Academy of the United States. London: N. Trübner and Co., 1868.

however, for the reasons stated in the preface, was never written, and we are left to ascertain these conclusions from expressions scattered throughout the work. We find it stated in the chapter headed "The Four Types of Religious Worship," that "the highest type of the religious idea is Pantheism," in some theory of which "the investigation of God by man's understanding has always resulted." But "the common instincts of man oppose his progress in that direction. He requires a personal God, to whom to fly in joy and sorrow." This worship is, however, according to our author, idolatry. "Youth and women—three quarters of the human race—are idolaters by natural necessity." The contradiction here is only apparent. Idolatry is merely one of the phenomena attending the progress of mankind towards perfection, and if the object of its worship is a false one, no less false is the philosophic idea of God expressed in Pantheism. There is something in God which escapes even the philosophy of Pantheism. The progress of science is, however, to "clear away from men's eyes the errors of the past, and lead them unto that liberty of spirit which is due to Christianity." We thus see that the destiny of mankind is a state of perfection, and also that Christianity has been an essential instrument of progress towards that state. As to individual man, he is "of a supernatural nature, of a spirit which we believe to be immortal, self-conscious, self-studious, inventive and creative, open-eyed, and tongued for speech, responsive to all mysteries, and destined for all glories." We see here faith in the future of both the human race, and of the individual man. But, to Mr. Lesley, orthodox Christianity is only a system of "thunder-and-war-providence worship," whatever that may mean. Christ has certainly come, and He is "the very incarnation of the Deity," but nevertheless he is merely another circle in the spiral of evolution—"the flower of the long development."

These are Mr. Lesley's conclusions as to man's destiny, and we will see how far they are supported by his reasoning. As to his classification of the sciences, we need say little beyond expressing our opinion that a science of autobiography, which Mr. Lesley thinks ought to be included, is neither possible nor desirable. Not possible, because the influences on which man's condition depends, are so subtle in their operation that the laws which govern them cannot receive a scientific formulation. Not desirable, because a biography constituted on strictly scientific principles would be of all books the most uninteresting. Mr. Lesley himself says that "the greatest of fools, Boswell, wrote the most delightful of biographies." While demurring to this hasty estimate of Boswell's character, we would ask Mr. Lesley whether it was not because Boswell was somewhat foolish that his life of Johnson is so readable?

We have next a chapter on "the Genius of the Physical Sciences Ancient and Modern." The difference between them, according to Mr. Lesley, is that in modern science *fancy* is replaced by experiment. This is no uncommon opinion, but, without qualification, it is by no means true. Experiment is enlarged observation, and it cannot be asserted that the ancient philosophers had no observation. On the other hand, experiment without fancy is impossible. Fancy suggests what experiment proves. The utmost that can be said against the ancients is that they did not put their fancy to the most perfect test observation can supply—although even this is by no means certain. Inventions in which we have the application of scientific principles must be tested by experiment. The great fault of the ancients was the insufficiency of their scientific data. This fault, however, was not theirs, but that of the age in which they lived. The Indo-European race, the only one to whom the formation of science appears to be possible, was then still in its infancy, and in this we have the true explanation of the imperfection of ancient science. Mr. Lesley sees in the formation of the nebular hypothesis, of which the genius is evolution, the highest triumph of modern scientific theory. In the hands of Mr. Herbert Spencer it cannot be denied that the doctrine of evolution is of the utmost value, but it must not be concealed that its full truth is far from having received that strict proof which it will require before it is accepted by its opponents. The nebular hypothesis requires a gigantic assumption to begin with. "That space was originally full of homogeneous matter obedient to the laws of physics," and it requires, moreover, "great movements beginning or re-beginning in this unformed, but living, infinite, centres of growing aggregation, and tendencies towards those centres."

One of the chief difficulties of the doctrine of Evolution, is to account for movements, aggregations, and tendencies in homogeneous masses. This difficulty, with others that arise at various stages of its progress, may be overcome, but they seem to point to a source of disturbance not taken into account, and which may require considerable modification in the hypothesis itself.

In the chapter on the "Geological Antiquity of Man," Mr. Lesley gives a very fair *résumé* of the facts from which that antiquity has been deduced. No one, not a mere creature of faith, can doubt that the proof of this antiquity is an accomplished fact. The conclusion that man has existed on the earth for hundreds of thousands of years, is irresistible in the light of modern sciences. We cannot hope to measure the period according to conventional notions of time; we must be content to measure it by geological ages, the exact length of which will possibly ever remain uncertain. If the existence of man

in the middle Tertiary period, inferred from the discovery of bones split longitudinally in Miocene deposits, be established, all estimations of man's antiquity, founded on calculation of the age of the Mississippi deposits, will be left far behind. The ante-glacial epoch of M. Renevier must be extended to embrace probably the whole of the Tertiary period, human remains referable to the earlier portions of which must be sought for in the tropical regions of the southern hemisphere.

Notwithstanding this conclusion as to the antiquity of man, we think Mr. Lesley is rather too severe on those modern clergymen who still adhere to the Mosaic cosmogony. There may be "no alliance possible between Jewish theology and modern science," but if so, no better reason can be found why the orthodox christian should reject the conclusions of modern science, on the very fair ground that orthodox christianity is founded on Jewish theology, to reject which, therefore, is to reject Christianity itself. Not the Christianity of Mr. Lesley, but that which supposes Christ to have come into the world to save mankind from the effects of Adam's sin in Eden. The fall is the central doctrine of Christianity, and it was impossible, if man was at his origin a primitive creature, something between an ape and a man, who emerged into existence upwards of a million of years ago, instead of being a perfect man, created spontaneously only about six thousand years since. How much less possible can the fall be, or rather its universal effects as supposed by Christianity, if there have been not one but many Adams, as required by the doctrine of plurality of man, advocated by Mr. Lesley. We certainly do not apologise for the dogma of the fall, but we think modern clergymen, who refuse to accept scientific doctrines utterly incompatible with it, are, to say the least, entitled to a considerable amount of forbearance in our judgment of their conduct.

In the chapter on "the dignity of man," we have Mr. Lesley's views on the ape origin of man. We quite agree with him that, "No open mind can help imbibing the spirit of the theory of development," and that the law of differentiation laid down by Mr. Herbert Spencer is of the utmost value in explaining how that development has proceeded. Whether, however, the development theory can be enforced without any transcendental reference, as Mr. Lesley asserts, is another question. It may be true that "in geology there must be some explanation for all the phenomena of palæontology," so far as is implied by the further statement that "if there be an apparent advancement and ennoblement of living forms through the ages, it must be dependent in some reasonable manner upon some slow advancing movements in the physics of the globe, with which the living forms must stand in amicable harmony." Man *could* appear on the earth only at

a certain epoch. But *why* should he appear at all? This question cannot yet be said to be satisfactorily answered by the theory of evolution. It does, indeed, assert that at a certain conjuncture in the world's history, man, as the product of the coincidence of certain natural conditions, *must* have appeared. Man is the final product of the operation of nature's laws. This may be so, but the theory of evolution does not furnish any proof that the operation of nature's laws can have this marvellous effect.

Mr. Lesley finds no difficulty in accepting the ape origin of man, but we fear the arguments he furnishes in support of it will not be deemed convincing by those who have hitherto rejected the doctrine. These arguments are chiefly those used by Professor Huxley. A relationship between the man and the ape is certainly established. But *what* relationship? Whatever the presumption may be as to the *descent* of man from the ape, we fear it must be admitted that there is as yet no proof. The ingenious argument of Professor Huxley, derived from the fact that the largest ape brain approaches the smallest human brain much more nearly than the latter does the *largest* human brain, proves nothing. The highest and lowest human brains are connected by others of all intermediate capacities, whereas there is no connecting link between the brain of the Hottentot and that of the Gorilla. Professor Huxley admits, moreover, the importance of the fact, that "there is a very striking difference in absolute mass and weight between the lowest human brain and that of the highest ape." He does not, however, think that the increased size of the brain will at once explain man's superior intellectuality. He, therefore, introduces the influences of an "inconspicuous structural difference" in the organs of speech. This, however, but increases the difficulty of the question, since we have now to account, not only for the larger brain with the accompanying gap between man and ape, but also for the difference in the glottis. Let us add, what is too often lost sight of, that these peculiarities of man's physical structure are accompanied by a *general* increase of muscular and nervous refinement which also requires accounting for. Supposing the brain of the gorilla were much larger than we now find it, and that there were no such "structural difference" as Professor Huxley supposes, would the gorilla *speak*? articulate speech being, according to Professor Huxley, the "grand distinctive character of man." In the absence of a *general* refinement of the ape muscular and nervous organisations, we think not. But mere articulate speech is *not* a distinctive character of man. Without this speech, nevertheless, man would not be man, and his possession of it can be accounted for only on the same grounds as those which explain the origin of his general refinement of physical structure,

both nervous and muscular. When Mr. Lesley says that *language* is no criterion of man's superiority, "for every animal has a language of its own," he misstates the question. No animal but man has naturally articulate speech, and all men *have* this speech. The argument that the difference is only one of degree will not apply here, as articulate speech is not what Mr. Lesley calls "language," although founded on it. The same must be said of the human *smile*, which possesses an element which no animal laugh can claim. Religion, too, although founded on the same principal of love as that shown by the dog for his master, has in its *reverence* something totally unlike the latter emotion. In all these human attributes, which are as much distinctive of man as articulate speech, not the result of imitation itself, we see the operation of one and the same principle of intelligence. It may be that these are all dependent merely on the superior physical structure which also distinguishes man. The existence of this superiority has, however, itself to be accounted for, and we have already pointed out that the theory of evolution is not yet competent to do this, and we doubt even whether the principles laid down by Mr. Herbert Spencer may not be made themselves to support the opposite opinion.

On the important question of the unity or plurality of mankind, Mr. Lesley is a disciple of Carl Vogt. The threefold division of human races agrees well with the existence of three types of manlike ape, each of which, according to Mr. Lesley, has striven "to reach the human ideal, but on different sides of the common development." The objection urged against this view on the ground of the non-existence of intermediate forms between these apes and man, has relation rather to the ape *origin* of man than to his descent from one or several apes. One of the replies to this objection, however, requires notice. It is that the most ancient skulls yet discovered are so degraded "that we may be reasonably excused for suspecting that the early races of mankind were further removed in the order of development from the noblest races now existing, than the apes are removed from them." If, however, this were so universally, whence the necessity for man of more than one ape ancestor? If the influences of external nature are sufficient to cause the evolution of an Indo-European out of a chimpanzee, they would be amply sufficient to develope him out of any form of primitive man. The chief argument in support of the three-fold ape origin of man is the great diversity between the three principal races of mankind. But at the point where they each issue out of the ape ancestor, these races cannot have had nearly so great a diversity. The idea of Mr. Lesley that the races of mankind appeared on the earth successively—"the black and

meagre races first and the white races last"—renders the plurality of man's ape origin still less likely. For if man once existed there could be no necessity in nature to revert to the ape type for the origin of a superior race of men; and that there was no such reversion is rendered almost certain by the existence throughout the earth's surface, at a very remote date, of a low human type similar to the Australian.

Mr. Lesley escapes another difficulty, arising from the existence of an almost endless number of sub-types of man, by ascribing their origin to the crossing between the three chief races. Many anthropologists, however, deny the possibility of effectual crossing between different races, and if the plurality of man's origin be once admitted there is no apparent reason for limiting his ape ancestors to *three*, or even a dozen. This question of change, whether by crossing or otherwise, is a most important one, and appears to be as far from being settled as ever. According to Mr. Lesley, "civilisation is the flower of migration," and we think that the *mixture* which has resulted from migrations must have had a vast effect on the constitution of human races. It may be that peoples have been thus affected without actually losing their racial type, however much it may have been modified. There is undoubtedly, however, another law at work, that of *segregation*, insisted on by Mr. Lesley. Peoples having affinity display a tendency to segregate, and the longer this is continued the greater is the tendency towards a fixity of intellectual phenomena. Should there be a disruption of the ties which bind together such a people, a migration is the result, which usually gives renewed activity to the mental forces of all the peoples who are thus brought into contact. It is clear, however, that in the early ages of man this result of migration can have been very limited, and when all men were equally barbarous, it must have been almost nothing. The principle of *mixture* of peoples, therefore, does not require an original plurality of races. This must be established on other grounds. The facts cited as to the change undergone by Europeans in North America are interesting and valuable if they can be relied on. Mr. Lesley declares that "there is not even a well-marked class of society in the United States" to answer the description of the so called "Yankee" type given by M. Pruner Bey. On the contrary, there are nearly half a dozen *varieties* of man in New England alone, descendants of European varieties.

The doctrine of an original plurality of races, requires that the influence of race should finally predominate over all other influences. One of the strongest objections, however, to this doctrine arises from the difficulty in identifying the descendants of the several primitive stocks. Mr. Lesley has not been very successful in overcoming this difficulty, judging from his classing the Berber with the dark or

African race, as distinguished from the white or Aryan race, to which Mr. Lesley asserts the Semites belong. We have always supposed that the Berber belonged to the Semitic stock, being one of its oldest branches. On the other hand, it is becoming more and more recognised that the Semite is intimately allied to the African family. It is clear that colour alone cannot be accepted as a criterion of race.

In the chapter "On the Early Social Life of Man," Mr. Lesley gives a *résumé* of the facts known as to the social condition of the early inhabitants of Europe. The conclusion Mr. Lesley arrives at, is, that although primitive man was not an idiot, he was merely an animal. The facts, however, do not bear out this conclusion; an animal has not *inventive* genius because he *imitates* the customs of mankind. The dove-tailed door and the plaited cloth of the old lake-dwellers, were the inventions of men who displayed the same faculties of observation and thought as ourselves. No doubt "when the earliest races of mankind appeared, they appeared in the form of fishing and hunting savages, the form most in harmony with the physical condition of the greater part of the earth's surface at that time." But this is the state in which many tribes still exist, and among them all we find the most ingenious contrivances for attaining certain ends required by the limited phase of their civilisation. All savages are, to a certain extent, able to control nature, and make her subservient to their own purposes. This, indeed, is the fundamental ground of superiority of man over the animal world. Without this power man would never make any advance towards civilisation, and for want of it the animal *has* never made any such advance. Whence this power? It may be said that man possesses it *as man*, but this simply carries the difficulty further back and brings us again to the old question of the origin of man.

The remaining chapters of Mr. Lesley's book are chiefly directed towards an explanation of what he terms "arkite symbolism." Mr. Lesley finds that every language of modern times bears the impress of "priest language," which has had its origin in the tradition of a deluge. The remembrance of this deluge was impressed so forcibly on the remnant of mankind as not only thus to affect its languages, but also to give its special form to the primitive alphabet, to originate the peculiarities of ancient architecture, and to form the key to the whole system of Egyptian worship. We have not space to enter into an examination of Mr. Lesley's system of arkism. We would only say that although it is highly ingenious, the etymologies on which it is chiefly founded are far from satisfactory, and if Mr. Lesley had thought of his own dictum, that we do not "get any ethnological light from philology worth speaking of," we think he would have been careful

not to place so much dependence as he has done on philological analogies."

Before closing this article, we would call attention to Mr. Lesley's chapter on the "Four Types of Religious Worship." Although we cannot agree with all Mr. Lesley's conclusions, we recommend the chapter to the careful perusal of those interested in the question discussed. Mr. Lesley finds four great types of religious life "embodied in the worship of the dead, the worship of the powers of nature, the worship of God in Heaven, and the worship of the universe." This division is ingenious, but we are inclined to think, nevertheless, that it does not express the exact truth. According to this view, most savage peoples worship their ancestors, a worship which, with the advance of civilisation, is exchanged for that of the powers of nature, or fetichism. Tried by the example of the Chinese, who to the present day are ancestor-worshippers, this cannot be correct. If we turn to Africa, the very home of fetichism, and take the case of the Kaffirs, one of its finest peoples, we see the same phenomenon; while if we go still lower, to the natives of Australia, we see no actual worship at all, but merely certain mysterious rites for appeasing the supposed anger of spirits. The fact is, that Mr. Lesley does not see the true nature of fetichism. The fetich possesses power only because it is, not merely representative of, but actually the abode or under the influence of a spirit. Immediately the spirit goes the fetich loses its power, and it is thrown on one side. Fetichism is in reality a worship, or rather a propitiation, of spirits. Among the aborigines of Australia this dread of the spirits of departed men is carried to a most amusing extreme. The burial of the dead has undoubtedly had its origin in this dread of departed spirits. The propitiation, or worship of spirits, had, however, at first no relation to particular ancestors; this is an after-developement, and is a natural result of the "differentiation" which marks all intellectual progress. In this way alone can be explained the extraordinary prevalence among the civilised nations of antiquity of the worship of ancestors. Nor do we think the discovery of the so-called "funerary grotto of Aurignac" any disproof of our assertion. The only ground for supposing that the fires lighted in front of the cave were funeral ones, are that no trace of fire has been discovered inside the cave, and no human bones or necklaces found outside; but this is really no proof whatever. Unless the survivors lived in the cave with the dead, they could have lighted their fires only on the outside, as it is quite evident, from the indications of tools and weapons being there manufactured, that these survivors passed their time on the spot. The idea of there having been a worship of the dead, is merely a fanciful deduction from facts

which are capable of a more simple explanation. African fetichism is, in reality, the same superstition as the Shamanism, or so-called devil worship of Asia. It is not because man fears the strange and mysterious objects of nature that he worships them ; it is because he suspects some hidden power behind, giving those objects their form and effect. This superstition is, however, not founded only on fear. Fear alone will never explain such a superstition as the reverence for trees, which is one of the most wide-spread. This can only be explained on the principle of utility, combined with a certain prominence of form or position, which renders the object a fit habitation for spiritual influence. The sacred groves of antiquity had a like origin, but the utility for man was there almost lost sight of in the fitness for the spirit. The silent grove of majestic trees exerted the same influence over the worshippers of the Pagan Gods as the cathedral does over the Christian. Mr. Lesley has, moreover, overlooked the fact that every the most abject of fetich worshippers has some idea, however indefinite, of a Supreme Being. Captain Burton states this to be true of most of the African peoples, and it is difficult on the principles Mr. Lesley lays down to account for the fact. It can be explained only by the supposition that there are certain phenomena of nature which appear to the mind too mighty to be caused by the spirits of ordinary men, and they are, therefore, referred to some great and mysterious being, who reveals himself to man only in those phenomena. Kings and great men came to be worshipped as Gods because they were so superior to the common mass of mankind, and in some cases they were identified with the most imposing natural phenomena.

In the Jehovah worship of the Jews we have a still higher development of the worship of ancestors. This is evident from the prevalence of the latter superstition among other Semitic peoples, and from the peculiar phraseology of the Jewish Scriptures. In combination with the worship of ancestors was an indefinite notion of a Supreme Being, such as that possessed by the Kaffirs, which afterwards became developed into that of the *God*, "of their fathers, Abraham, Isaac, and Jacob," the name for whom was adapted from a kindred people. According to this view, we see in the progress from the fear of departed spirits, shown by the savage, to that of Jehovah exhibited by the Jews, a rational evolution of religious worship,—pure fetichism and planetary worship being phases of degradation rather than of evolution. The highest type of religious belief is, as Mr. Lesley points out, Pantheism. Towards this is the tendency of all modern Aryan thought, whether in Europe or America, or among the natives of India. This Pantheism, however, takes its tone from Christianity even in the minds of the enlightened students of Benares, many of

whom are as well read in the controversial literature of Europe as, at least, their English brethren. It is, nevertheless, the morality of the New Testament chiefly which is thus influential, and not its theological dogmas. These partake too much of the superstitions of the old world religions to retain their influence, and Mr. Lesley has done good service in showing that there is a religious evolution which necessarily ends in Pantheism—Christian, while discarding the special dogmas of orthodox Christianity.

We must here leave Mr. Lesley's book. It contains several errors of fact and various misnomers, possibly due to his want of books of reference. Its philological comparisons and deductions, although often ingenious, will not, we think, stand the test of accurate criticism. Again, Mr. Lesley has expressed certain disputed conclusions with too confident an air; while with others, relating more expressly to his peculiar views on Arkite Symbolism, we shall be surprised if many competent readers agree. On the whole, however, we can recommend Mr. Lesley's book as a careful summary of the facts bearing on the theory of evolution, so far as concern the origin and progress of man. It might have been condensed, and its style in some places altered with considerable advantage, but the circumstances under which it was written and published will in a measure account for this not having been done. In the interests of anthropological science we wish it every success.

SPROAT'S STUDIES OF SAVAGE LIFE.*

IN these days of sensational science, it is really refreshing to meet with a book sensibly and modestly written, and dealing, with the tact of a close observer, with facts, to the entire exclusion of grandiose theory. It would have been difficult for Mr. Sproat to have selected an arena for his studies less known, and hitherto more contemptuously regarded.

A short narrative of the circumstances which surrounded the author during the collection of his materials, will best explain why he was able to compress into a small volume so much that is valuable, from its bearing the stamp of truth. Mr. Sproat proceeded to Alberni, the

* *Scenes and Studies of Savage Life*, by Gilbert Malcolm Sproat. London: Smith, Elder and Co., 1868.

English name of the settlement on Nitinaht (or Barclay) Sound, in his capacity as one of the proprietors of that place, and held office as a colonial magistrate during the period of five years. Thus, he says himself, in his preface :—

“ I lived among the people, and had a long acquaintanceship with them ; I did not merely pass through the country. The information which I give concerning their language, manners, customs, and ways of life, is not from memory, but from memoranda written with a pencil on the spot—in the hut, in the canoe, or in the deep forest ; and afterwards verified or amended by my own further researches, or from the observations of my friends.”

Hence the air of freshness which is breathed throughout this pleasant volume, as will presently be seen. As a picture of savage life of our own day, and which cannot fail to interest on account of its probable analogy with savages of very remote ages, it is desirable to be very minute in the present attempt to summarise Mr. Sproat's observations. We may observe, in passing, that it is somewhat of a drawback that no map of the west coast of Vancouver's Island is given, as it would greatly add to the value of the book.

Mr. Sproat first entered Nitinaht, or Barclay's Sound, in August, 1860, and proceeded to form the nucleus of a settlement : although, properly speaking, the territory had already been acquired by a title derived from the Crown, it was found necessary to go through the formality of a further purchase from the Indians. After some negotiation, twenty pounds' worth of goods settled this preliminary ; but the next difficulty was to obtain a voluntary migration of the tribe in occupation. After waiting two or three days, Mr. Sproat appealed to them, and they removed to a short distance.

For a considerable time the settlers were engaged in setting up their new home ; and in this interval began to effect improved relations with their wild associates. At first, many attacks upon the settlement were anticipated ; but in time this all passed away and better opinions began to prevail. It may be mentioned that the Aht tribes look upon the sailors in ships as a separate tribe of King George-men, and they cannot understand why the fighting should all be left to a few individuals.

Before proceeding to an account of the tribes themselves, Mr. Sproat describes the features of the country, which seem to consist of land and water “ pretty much mixed,” as the Yankees say. Capacious inlets of the sea throw out arms into the interior of the country, and the broad surface of these sounds are studded with rocky islets—as in the Scar in the north-west of Europe—covered with scrubby, hemlock, cedar, and pine trees. These pine forests clothe the sides of the mountains, and

the whole district is singularly rugged and mountainous, resembling parts of the highlands of Scotland. "The back of the world, brother," an old Gaelic woman once said on coming to this district; "you are bringing me to the back of the world."

With regard to the natives of this wild country, it would seem difficult to estimate the population exactly, but between Pacheenah and Nespod there appear to be twenty distinct tribes of the Aht nation. In number these tribes vary greatly. Some consist only of five persons, as the Manosaht, on Klah-o-quaht Sound; and the largest tribe, the Nitinaht, numbers 400; they average about 80 individuals per tribe, and are all more or less nearly connected. In an appendix, Mr. Sproat gives their native names and numerical strength, to which the reader can refer. The average ages of their men, taken in one tribe, the Opechisaht, in 1864, seemed to be about fifty-three; and the most influential chief was then fifty-five years of age. The tribes are not confederated, and they practise different arts: one is skilled in canoe-making, another in painting boards for ornamental work, and so on. Even in matters of cultivation, the tribes maintain a custom of growing one article, and bartering it with their neighbours. In physiognomy the Aht tribes differ; faces of the Chinese and Spanish types may be seen, and they vary also in intelligence. No political supremacy is specially assigned to any tribe. A mythological personage, Quawteaht, is supposed to have originally given them their tribal names, as Toqu to the Toquahts, Ohy to the Ohyahts, Nitin to the Nitinahts, the *ah*t in all cases being added in respect of the memory of their legislator. The language has not varied for centuries. A vocabulary of this is given by Mr. Sproat, and may prove interesting to philologists.

"The external features of all the natives along this coast are much alike; but one acquainted with them can generally distinguish the tribes to which individuals belong. I have noticed that the slaves have a meaner appearance than the free men, and that those few small tribes who dwell inland, along lakes and rivers, and who live on a mixed diet of fish and flesh, have a finer stature and bearing than the fish-eaters on the coasts. . . . Individuals may be found in all the tribes who reach a height of five feet eleven inches, and a weight of a hundred and eighty pounds, without much flesh on their bodies. The extreme average height of the men of the Aht nation, ascertained by comparison of a number, is about five feet six inches; and of the women, of about five feet and a quarter of an inch, a stature which equals that of the New Zealanders.* Many of the men have well-

* It may be mentioned, that the author severely criticises the absurd description of the Ahts as given by the Abbé Domenech, who, in this case, as in several other matters, evinces crass ignorance of anthropological science.

shaped forms and limbs ; none are corpulent, and very few are deformed from their birth. I have, however, seen very few who had been born crippled ; one, with withered crooked legs, stiff at the knees, was an excellent canoe-man. The men, as a rule, are better looking than the women. The latter are not enticing, even when young, though one meets with some good-looking women ; but these, in a few years after reaching womanhood, lose their comeliness. They are short-limbed, and have an awkward habit of turning their toes in too much when walking."

The men are described as strong, with great powers of endurance, going a long time without food ; their complexions are of a dull brown. They all swim well, and cannot be beaten as divers ; they bathe every day until after middle life. The men's dress is a blanket ; the women's a strip of cloth, or shift and blanket. The men have but little beard or whisker—hair is never shaven, is black or dark brown—slaves wear the hair short : to cut off an Indian's hair is a punishment, as he is thereby exposed to the derision of the tribe. The face is rather broad and flat—the mouth and lips large—the skull fairly shaped—the eyes small and long, and deep set, very dark hazel—the nose is remarkably well-shaped in some instances : a piece of cockle-shell, a brilliant ring, or a bit of brass, is often put through the cartilage, and similar ear ornaments are worn by both sexes. The teeth are regular but stumpy. There is no tatoo, but they paint the face. The women cease to paint at twenty-five, and then wear feathers in the hair. In war time the face is blackened by the warriors.

The heads of Aht children are but slightly deformed, only as much as the resting in the cradle may suggest. "The infant is laid soon after birth on a small wooden cradle, higher at the foot than the head. A padding is placed on the forehead, and is pressed down with cords, which pass through holes on each side of the trough or cradle ; these being tightened gradually, the required pressure is obtained, and after a time the front of the skull is flattened." This does not appear to injure the brain. The tribes age rapidly ; they do not gradually pass from the full vigour of manhood into old age.

The author enters into minute particulars as to their houses, their feasts, and their customs, which it would be impossible to give space for here. These resemble those of many neighbouring tribes, and present the main features of savage life. Sometimes the occurrences in the settlement of Alberni savoured somewhat of the ludicrous, as the following will show:—

By accident rather than design, one of the men at an outlying farm, the potatoe-fields of which the Indians were in the habit of plundering, shot an Indian with a pea, which penetrated into the left lung, and it became necessary to hold an inquest—at which the author, in his magisterial quality, presided.

The first difficulty was to find a doctor to make a *post mortem* examination: this was surmounted by the fact of one of the woodmen having once been a staff surgeon in the British army—his diploma being in his chest. A motley jury was then sworn, and the culprit brought in. The principal testimony consisted of the fact of the pea being found, and of the prisoner's own words to his companions, "Jack! I've shot an Indian!" The jury was duly charged and dismissed to find a verdict; it being evidently supposed by the author that some kind of verdict, as "accidental slaying," would be found. The jury were a long time gone, and the surprise of the magistrate must have been extreme when the verdict was, "we find the Siwash (name of his tribe) was worried by a dog!" The judge, who could scarcely maintain his gravity, sent them back to find a verdict in some slight degree probable; and, after a longer time, the jury reappeared and said, "we say he was killed by falling over a cliff!" the country for a mile round the body was as flat as a table. It was of no use, the men hung to their companion; and the neighbouring Indians were rather pleased than otherwise at the transaction, as the man belonged to a distant tribe.

In terse and vigorous language, the author describes the native manufactures, the condition of the slaves, the marriage customs, the tribal ranks and political system.

Especially valuable to the philologist is the chapter on the language of the Ahts and the vocabulary at the end of the volume, which is extremely full.

The religion of the Ahts formed a considerable subject of inquiry on the part of the author, and his remarks on the difficulty he found in arriving at any conclusions on this head, are most interesting, and indeed anthropologically valuable. He says (p. 205):—

"I was two years among the Ahts, with my mind constantly directed towards the subject of their religious beliefs, before I could discover that they possessed any ideas as to an overruling power, or a future state of existence. The traders on the coast, and other persons well acquainted with the people, told me that they had no such ideas, and this opinion was confirmed by conversation with many of the less intelligent savages; but at last I succeeded in getting a satisfactory clue to such information as this chapter contains. Is it not possible that many otherwise observant travellers have too hastily assumed, after living a few months among savages, that they had no religion? It is no easy attainment to know the language of savages conversationally; and to get their confidence—particularly the confidence of the intelligent Indians—is a still more difficult task. *A traveller must have lived for years among savages, really as one of themselves, before his opinion as to their mental and spiritual condition is of any value at all.* The fondness of the Ahts for mystification, and the

number of 'sells' which they practise on a painstaking inquirer going about with note-book in hand, are unexpected and extraordinary on the part of savages, whom we regard as so mean in intelligence. They will give a wrong meaning intentionally to a word, and afterwards, if you use it, will laugh at you, and enjoy the joke greatly among themselves."

It would seem that their religion, such as it is, consists in sun and moon worship, the former being feminine, and the latter masculine. Of a supreme and beneficent being they know nothing; but they seem to have some idea of a vague being of destiny. This being they call Quawteah, but hold that he was once a man as they are. He is now chief of a happy shadow-land, whither they also hope to go at some time or other, to live as the guests of Quawteah; but this, they believe, is only for chiefs and warriors. Quawteah and Odin are alike, the author says; they drive away the pauper and the bondsman from the doors of Valhalla; in this, by the way, resembling the beadle of a modern fashionable church. He is regarded as the framer, but not exactly the creator, of all things; some special things excepted. Some say he made the sun and moon; but others say they are superior to him, although they are more distant and less active. But the earth, and trees, and rocks, and all the animals owe their existence to his formative power. He also gave names to everything; even to the Indian houses, which were inhabited by birds and beasts, subsequently changed into Indians, a species of Darwinism of a vague kind. They also believe in an evil spirit; but Quawteah and the evil spirit, perhaps Tootooch, receive no worship as the sun and moon do. There are rude ideas of transmigration or transformation into animals, and, indeed, pre-existence in that form, as noted above. Chay-her is the name given to a country deep down beneath the earth, where all those go who do not go to Quawteah. In this country things are much as they are on the earth, but with inferior houses, no salmon, and very small deer. All these matters are under the care of their medicine men, who are as superstitious as the common run of their class. Their medical usages are very primitive; but they employ many simples, which Mr. Sproat recommends to the attention of physicians.

The form of burial is neither by incremation nor interment. The practice is to place the chiefs and young girls in rudely-constructed boxes, fastened upon trees about twelve feet from the ground; a white blanket is thrown over the box, and four or five torn blankets hung on neighbouring trees. Old women, and men and boys of no rank, are wrapped in worn blankets, and left on the ground. Secluded headlands are commonly used for Aht burial-places, and anthropological

explorers may perhaps avail themselves of the hint in order to obtain crania of this interesting people.

The great experience of the writer of this volume among savages will render the extracts we are about to make from his concluding chapters, in which he considers the effect upon savages of intercourse with civilised men, and upon the disappearance of antiochthonous races, most interesting to anthropologists. Indeed a work so full of descriptive anthropology we never read.

Learned bishops sometimes rush in where anthropologists fear to tread, and an exemplification of this unhappy fact is given in the following extract from a speech made by Dr. Selwyn, Bishop of New Zealand, at Manchester, on the 7th of October, 1867, which is placed by Mr. Sproat at the head of the remarks from which we shall take some portion.

The right reverend gentlemen, probably emulating Parson Brownlow, Mr. Spurgeon, *et hoc genus omne*, thus delivers himself :—

“They had heard it said that it was a law of nature that the coloured races should melt away before the advance of civilisation. He would tell them where that law was registered, and who were its agents. It was registered in hell, and its agents were those whom Satan made twofold more the children of hell than himself.”

Far be it from us to dispute the authority of the episcopal assertion. It is well-known that such registration does take place, as we have on our shelves verified copies of two similar documents, being contracts between His High Mightiness Prince Lucifer, of the one part, and Master Urban Grandier (“done in this year and on this day”) of the other, and in the second instance ratified by the Council of Demons. Signed by Lucifer, Beelzebub, Satanas, Elimi, Leviathan, and Astaroth, and countersigned by the Secretary of the Council, Baalberith. But in anthropological matters we are disposed to think that the authority of the gentlemen of Dante’s and Faust’s favourite regions is at least open to criticism.

Mr. Sproat thinks, and justly, that if the bishop desires to influence the opinions of reasonable men on this difficult point, he must use other language than this. Indeed, it seems strange that the experience of the prelate among the Maori should have led him to such conclusions. The permanent occupation of any territory by civilised men must mean the extirpation, more or less remote, of anterior races occupying the soil, and antagonistic to civilisation. But whether it be possible to so modify occidental civilisation as to render a part of it acceptable to savage or oriental nations, is entirely another question. That is a purely anthropological question. Mr. Sproat very properly puts it thus, and as in the main we agree with that gentleman, we shall avail ourselves rather of his words than our own.

"By the expression 'savage native population,' I distinguish between the rudest untutored races and aboriginals of finer native races more capable of civilisation ; with these latter, or with an improved remnant of them, it is not yet shown that English colonists, or their descendants, will not intermix. I hope it may be shown in New Zealand that such intermixture is possible, but, as far as experience has taught us, it is extremely improbable that any large population of English descent will mingle their blood and grow up side by side with any race that differs widely from them in character and in civilized culture. *In all dominant races, indeed, there is, to a large extent, an aversion to intermixture with other people—whether civilised or uncivilised.** For instance, the English colonists have not yet shewn any tendency to amalgamate with the descendants of the French in Canada, who live close to them in the same country, and are almost on the same level of civilisation, and whose women are most attractive."

After insisting upon the necessity of correct ideas as to the effect of colonisation upon native races, he proceeds to say that although the idea of extinction may be regarded by some with repugnance, as leading to a harsh treatment of the natives, he has himself no apprehension in the matter, and rather looks upon this possible extinction as a stimulant towards acts of justice and forbearance on the part of civilised settlers, if a clear view could be obtained of the importance of the crisis. He then proceeds :—

"Several agencies—moral as well as physical—are concerned in the disappearance of aborigines before intruding civilised settlers, and these agencies must be properly estimated by the inquirer who seeks to form a right opinion on the subject. The problem he has to solve is a difficult one, which requires facts, and not theories, for its solution, and unfortunately we possess few accurately observed facts that bear on the question. These, indeed, will always be hard to obtain, owing to the want of opportunities by travellers and the difficulty of observing precisely the particulars of change which accompany the continual intermixture of two different races—the one civilised and the other not."

He then states the first question to be whether there be not in these races elements inherent to their nature leading to decay, and which are powerfully stimulated and intensified when the race habitually consorts with individuals of a superior race. He cites the experience of the Jesuits in California, and of others in proof of this, and we are disposed to consider it as extremely likely that the juxtaposition of the unquestionably artificial civilisation of Europe and the uncivilised native life of savagedom, may have a tendency to appal and obscure the savage mind—in fact, that the mere presentation of a foreign and novel state of existence may frighten the "noble savage," first out of his wits, and then out of existence altogether.

* The *italics* are the reviewer's, not the author's.—ED. ANTH. REV.

At any rate, it is an indisputable fact that the native inhabitants of British Columbia, from the report of intelligent fur traders, have appreciably decreased. Ardent spirits at the time had not been introduced, and the inevitable deterioration produced by intermixture of alien races, with its premonitory symptoms of decay by a train of diseases, had, on Captain Cook's visit, already set in, and at the present time a population of four thousand individuals has dwindled down, without epidemics or outside influence, to six hundred. This may partly be attributed to breeding in and in, but it is emphatically not the result of civilisation. Mr. Sproat says :—

“The natives have remained in almost a primitive state, only visited occasionally by a ship of war or a trading schooner ; they have had plenty of food and better clothes than they possessed prior to their knowledge of blankets, and their number has not been lessened by any epidemic, nor by the division or emigration of any of the tribes.”

It may be urged that the occasional visit of a ship of war—in fact, an incursion of Jack Tar, may have a deteriorating influence. In some cases it must have been so, but discovery-ships are usually under the charge of officers of the navy capable of restraining their men from undue excesses. Perhaps it would be wise for the Government to issue specific and peremptory instructions as to men's leave in savage countries. In the case of the Nootka, or Moouchaht, population, it is proper to state that the Nootka women do not visit any white settlements for the purpose of prostitution. Anthropologists do not pretend to the protection of aborigines, but they at the same time have no interested motives in their extinction ; to them the negro and the red man afford interest and instruction alike ; but, unlike a very unfortunate, not to say malignant, set of men at the present day, they do not desire to exalt the inferior at the expense of superior races. If the tendency is that they die out, that tendency, thus a natural one, cannot be finally arrested, although mitigation may be possible. Bishop Selwyn's sweeping assumption concerning the “chancery” of the “other place,” may whistle down the wind. Let us, however, rather return to the consideration of facts.

Referring to the tribes among whom the author lived for over five years, those upon Nitinaht or Barclay Sound, he is clearly of opinion that they would have declined just as speedily without the introduction of cultured men. During the whole of the period just named, these savages received the greatest kindness, and improvements of every description were made in their dwellings, food, and raiment, the use of ardent spirits being also strictly prohibited—in fact, every care and forethought was taken to leave these men in the enjoyment of their native customs, with such advantages of civilisation as they might voluntarily adopt. Yet what did the effect of the presence of this orderly settlement prove to be on the savage native as a whole ?

At first no symptoms either favourable or unfavourable were exhibited; the influence probably working but slowly in any direction. They appeared to like to give occasional labour in the settlement, purchasing new planks and blankets with the money they earned. Change of dress did not ensue, the blanket maintaining its supremacy over the European costume, although, for a short time, some few, in a spirit of masquerade, swaggered about in the cast-off clothes of the whites. During the first winter they lived upon what they purchased from the whites—rice, flour, potatoes, etc.; but this innocent state was doomed to change, and the instability of savage character, wherever existing, soon established itself.

Some of the young sharp-witted Indians became suddenly what Mr. Sproat happily calls "offensively European;" but the great mass of natives retired to their villages and remained in seclusion, heavily brooding over the fancied—to them, indeed, real—wrongs committed by the intrusion of the whites. Yet there was no ill feeling; the curiosity of the savage had been satisfied, and his mind had become confused and stunned, as it were, by the machinery, steam vessels, and energetic labour of civilised man; he was despondent and discouraged. This, as Mr. Sproat urges, has its analogy amongst white men.

"The same feeling, in a comparatively small degree,—a beaten, cowed feeling, with a sense of some loss of self respect,—must have been experienced by most men, at some change of their work or condition in life, which has brought them suddenly among men vastly their superiors in general, and also in special intellectual ability and force of character" (p. 278).

We may here remark, in passing, that probably the main advantage of civilisation does not consist in the prolongation, by superior conditions, of human life, or in the enjoyment of greater material comfort; but in the gradual removal, by healthy emulation, of this very oppressive feeling of inferiority. The civilised man tries again; the savage resigns the task in despair.

To return to the immediate subject. The natives soon grew more than usually suspicious;—what did the white men mean? They did not want the white men. Why, then, did the white men come? Thus they argued. In the commencement of the settlement they said they did not want to sell their land or their water. A subtle influence was sapping the confidence of the Indian mind in his old pursuits and superstitions. Sickness ensued among those living near the settlement. Sproat especially says that spirits, syphilis, and similar destructive agencies, were not and could not be at work. Fear proved, as suspected, the main cause of illness; and diseases produced by terror, such as diarrhoea, dysentery, and the like, prevailed, pushing up the death-rate to a great degree.

"Nobody molested them; they had ample sustenance and shelter for the support of life, yet the people decayed. The steady brightness of civilised life seemed to dim and extinguish the flickering light of savageism, as the rays of the sun put out a common fire."

Three modes of action upon savage tribes have generally been suggested by the untravelled *οἱ πολλοί*, and it is somewhat interesting to observe how, in the main, the imaginative faculties of this class of man are at variance with observed facts. First, every colonist is elevated into a monster of injustice and cruelty; second, he is presumed to carry with him "all the ills that flesh is heir to," and to spend the majority of his time in the practical dissemination of diseases; and finally, the "home-keeping" purists, with "homely" wits, enlarge, with the unctuousness of a Chadband, upon the hopelessly vicious tendencies contracted by every one who leaves his native land to seek fortune and comfort on such barren and inhospitable shores, to be fertilised by his energy and industry.

Mr. Sproat considers that it may be "affirmed as an historical fact that very little violence has been used by English settlers generally in superseding weaker races." While many cases of cruelty can no doubt be proved, yet, in the main, the history of the intercourse of our countrymen with savages is creditable. Allowances have to be made for the settler. His position is widely different from the salaried mercantile emigrant or clergyman. What is a settler to do under circumstances of very small capital, and probably a total absence of many of the absolute necessities for mere animal existence?

"Not content—like the lazy savage—to be a fisherman or hunter, he takes a firm hold of some object for his labour that presents itself to his grasp, and is prepared immediately to defend his acquisition, and to protect his family, if assailed."

As a squatter on some unoccupied land, he feels himself somewhat differently situated from a mere labourer; he has not only to fight for existence, he is raising land value, and the original wrong of intrusion gradually becomes a right by such improvement. It is only in extreme cases that he interferes with the savage, and that individual necessarily migrates, and perishes without absolute open cruelty on the settler's part. Next comes the question of diseases, said to have so great an effect in destroying the savage. Diet of a new kind, rum, and the—to a savage—unintelligible religion of the European, must act both on mind and body, and thus render him receptive of alien and fresh forms of disease; but Mr. Sproat has serious doubts as to what ideas are intended to be conveyed when it is said that diseases are carried by civilised man among the savages.

"What," he asks, "are these diseases thus carried from England

by emigrants—diseases contagious in their nature, yet harmless in a crowded ship—destructive on shore to the aborigines only? Phthisis, small-pox, syphilis,—what? I believe the last-named disease alone is meant; but as this disease prevails among savages generally in their primitive condition, though in a milder form than among civilised men, the introduction of it, even if it occasionally happens, cannot be charged against the colonists as a race. Syphilis, and several other diseases, assume a peculiarly virulent character when the two races commingle. More than this cannot, I think, in relation to this subject be said of it."

Turning to the subject of "vices," it is most unquestionable that people mean by this the English vice of drunkenness, and the example it affords to the savage. Now, in this case the savage is playing with edged tools; whether the settler be sober or drunk, the savage, in his inexperience, never practises temperance. It is not in his childish nature to estimate the effect of what he takes: and whose office is it to point this out to him? Not that of the settler, who has no time; nor of the missionaries, whose efforts, as a class, are directed towards the accumulation of wealth, and the establishment of a religious supremacy. The magistrate, the lover of order, and the scientific explorer, alone have any interest in doing so. But how few are these? Let governments encourage science, and these evils may be arrested. There is no middle course in this. Anthropologists alone can suggest the proper practical means.

In the following conclusion all will agree:—

"The Indian loses the motives for exertion that he had, and gets no new ones in their place. The harpoon, bow, canoe, chisel, and whatever other simple instruments he may possess, are laid aside, and he no longer seeks praise among his own people for their skilful use. Without inclination or inducement to work, or to seek personal distinction,—having given up, and being now averse to his old life,—bewildered and dulled by the new life around him, for which he is unfitted, the unfortunate savage becomes more than ever a creature of instinct, and approaches the condition of an animal. He frequently lays aside his blanket and wears coat and trousers; acquires perhaps a word or two of English; assumes a quickness of speech and gesture, which, in him, is unbecoming, and imitates generally the habits and acts of the colonists. The attempt to improve the Indian is most beset with difficulty at this stage of his change from barbarism; for it is a change, not to civilisation, but to that abased civilisation which is, in reality, worse than barbarism itself. He is a vain, idle, offensive creature, from whom one turns away with a preference for the thorough savage in his isolated condition."

At this stage of the Indian's progress the effects of drink are most exhibited. The symptoms produced are inconceivable to those who have only seen civilised drunkards. To the savage it is a consuming

indulgence, "producing madness, rage, and frantic excitement, followed quickly by disease, languor, despair, and death." The habitual contact of the savage with a superior people also renders him peculiarly sensitive to disease, especially to sexual disorders.

The author takes but a desponding view of what may be done towards saving the savage races. Isolated bodies of savages may be benefited, but the majority, never. Into this Mr. Sproat briefly enters; but in this already too extended notice, we have no space now to enter. It is sufficient to add, that emphatic testimony is borne to the utter failure of ordinary missionary enterprise; the grandiloquent reports sent home are utterly untrustworthy, calculated to give totally wrong impressions, and to perpetuate a system of heartless fraud.

K. R. H. M.

THEOLOGICAL PHILOLOGY.*

THIS Book is an illustration of the remark "what great effects from trifling causes spring." Newton deduced large physical laws from the fall of an apple, and our author has arrived at many deductions of great importance, having started from the simple question "how did John and Jack become synonymous?" This progress from the starting point was made through the relations between other names of ancient origin and modern ideas. On finding that such cognomina as Elizabeth, Anna, Isabella, and others, date from a remote antiquity, Dr. Inman has investigated such ancient names as occur in the Bible and elsewhere, with an especial eye to the ideas which dictated their adoption.

Our author shows that appellatives amongst the Shemitic nations were not hereditary; there is, for example, no "David the second," nor "Solomon the third," spoken of in the Scriptures. He tells us, too, that cognomina were given at birth, or shortly afterwards, whence he deduces the corollary that if a name is assigned to an historic personage which describes his character, the reader must believe that the cognomen was invented by the historian who tells of the man, rather than given by authority when the individual was young. Thus,

* *Ancient Faiths embodied in Ancient Names; or, an Attempt to trace the Religious Belief, Sacred Rites, and Holy Emblems of certain Nations, by an interpretation of the names given to children by priestly authority, or assumed by prophets, kings, and hierarchs.* By Thomas Inman, M.D., printed and published for the author; to be had through Trübner, Paternoster Row, and all booksellers. 8vo., pp. 789 (*largely illustrated*).

DAVID is said to signify "beloved" (by God), but that he would be so could not be predicted of him at his birth, and consequently it is more probable that his original appellative was DUDAI, which signifies "love apples," this being by simple transposition changed into DAVID. The author then states, on the authority of Rawlinson and other scholars, that names were in ancient times given by priests or oracles, and that these introduced into the cognomen the titles or attributes of the god or goddess who was the object of their worship. One remarkable illustration of this is an appellative found in a Babylonian inscription which signifies "Nebo gave the name." From this very important circumstance it follows that an investigation into the signification of names is one of the means by which a knowledge can be attained of the names of ancient gods, and the ideas associated with them and with their worship.

Having thus laid the foundation for future remarks, the author goes on to show the strong probabilities which exist that the religious notions of the Shemites were largely diffused along the shores of the Mediterranean, the maritime borders of Europe, and the British Isles, by means of traders from Tyre and Carthage, whose naval enterprise and religious belief he compares with those of the Dutch, English, Americans, and Spaniards. The author then expresses his belief that the colonisation of Europe has been brought about by two distinct elements, the one being the Indo-Germanic race, who travelled wholly by land, the other the Phœnicians, who voyaged in ships. Whenever these two came into contact, he considers that a language was formed resembling the *lingua franca* now in use along the shores of the Mediterranean. In this it is certain that the tongue of the seafaring travellers would preponderate, whilst inland there would be few words found which had been imported by sea. Hence the author accounts for the frequent appearance of Shemitic names on the European seaboard, and of the remains of Phœnician customs in her maritime provinces.

Having then shown that there is strong probability for the belief that many current cognomina and names of localities are of very ancient origin, and that they were originally associated with the religious belief of the Shemitic races, the author then institutes an inquiry into the theology of the Assyrians and Babylonians. In doing this he assumes that the inquirer is at perfect liberty to illustrate the past by the present, for no one, he thinks can assert any antiquated form of religion to be too absurd to be possible, if it is shown that a faith of a corresponding character is held by one or more nations now existent. Before examining the religion of other people, the author takes a rapid review of that which obtains credence in Great Britain, and in few

words shows the nature of the glass house in which we ourselves live, thus showing the advisability of our not throwing stones at our neighbours too actively. Our author shows very strongly that the Roman Catholic form of christianity contains a large amount of paganism, and he frequently adopts papal doctrines, dogmas, and symbols as evidence of Babylonian religious tenets.

When describing the ancient gods of Assyria, the author refers to the reverence with which the lingam and the yoni are held in Hindostan and Asia generally, and in this part of the volume he enters into particulars which are not to be found in any other published English book—although such information is readily to be met with in France and Germany. The difficulties which beset the author when he entered upon this portion of his task are evident to the reader, for he finds that in some instances the English language is exchanged for the Latin. It is, under all circumstances, a very trying task to dress up what are considered indecencies in honest garb, and the labour is not the less difficult because the obscenities have been inseparably interwoven with what passes to this day as religion. It is this which has doubtless deterred our contemporaries from reviewing this very important book; yet we think that the interests of morality require that the subject referred to should be widely known. If, as the author propounds, the doctrine of the christian trinity be founded upon the fact that the organ which characterizes the male is composed of three distinct portions, which are, so to speak, “co-eternal together and co-equal”—three parts, but one thing—it is clear that few who know this would care to take part in the strife between Athanasians and Arians. To many it may seem to be an outrageous idea that such a trinity could ever be regarded with honour; yet that it was so is clear from the 23rd chapter of Deuteronomy, and the first verse, wherein we are distinctly told that any one in whom a portion of this triad was injured was to be excluded from “the communion of saints.” Again, if, as the author asserts, the reverence in which the virgin is held by many at the present day, is nothing more than a relic of the worship of the yoni, or a counterpart of the impure cult of the Egyptian Isis, the Greek Ceres and Venus, and the Assyrian Ashtorath. If “Mary” is nothing more than a covert means of referring to the particular part which characterises woman, we cannot conceive that any one would fight for the supremacy of a priesthood professing to honour such a part; we conclude, therefore, that it is a duty, however disagreeable a one it may be, for all who profess to be religious teachers, to examine into the real foundation of the faiths current at the present day. Dr. Inman endeavours to lead his readers logically to the conclusions which we have indicated above. Quoting mainly

from Rawlinson he shows that the godhead amongst the Mesopotamians was a "quartette," which he considers to be equivalent to the Hebrew ARBA—a word signifying four—and literally allied to *erva*, the meaning being "the *pudenda*" of both sexes. Of these four three are males and one is female. These are described as the creators of all things, an idea which is manifestly taken from a belief that the Almighty acts in Heaven as He has taught His creatures to do on earth. As no new being is formed in our world without a conjunction between the male triad and the female unit, a similar union is presumed to occur on high, and the author shows that amongst ancient, and some modern nations, the Almighty is described as androgynous. That this idea prevailed even amongst the Jews, as well as other Shemites, is shown by their use of such words as Elohim, Baalim, Ashtorath, which indicates a plurality or duality of individuals who speak and act as one. With the idea thus indicated the sun and moon were associated, the former to represent the male, the latter the female creator, and "the four" is still indicated in papal and other churches by the sun and moon in conjunction. The earth frequently replaces the moon in mythology.

Dr. Inman then calls the reader's attention to the antiquity and signification of certain signs or symbols which are used as freely in christian churches as they are in pagan temples. He pays, moreover, special attention to the curious figure which is spoken of by Cuneatic scholars as the grove, and he demonstrates, we think, that it is a covert way of indicating the female sex, and analogous to the sistrum of Isis, *vesica piscis*, or the lozenge of the Virgin Mary. He concludes hence that the Mesopotamian religion acknowledged the superiority of the Mother of God, and he again calls attention to the close resemblance between the Babylonian and the papal religions; into which Dr. Inman does not enter fully, as he wishes his readers to consult Hislop's able work entitled *Nimrod v. the Papacy*.

In pursuing the subject of symbols, the author gives an illustration which proves that the "fleur-de-lys," once a venerated emblem in France, represents the male triad. To this he adds many others to show that the *crux ansata*, or handled cross, was an emblem of the union of the two sexes, just as the letter T was an emblem of the Almighty Father. The coronation orb placed in the hands of our own sovereigns, equally indicates the conjunction of the Trinity and the Virgin. After a long preface, extending over nearly 300 pages, and whose main features we have thus described, Dr. Inman has a short note, in which he indicates that the scope and intention of his work has been modified more than once by other investigators having taken up the subject, and published their conclusions, before he had advanced

far towards the completion of his manuscript. Amongst the authors indicated, he mentions the Rev. J. S. Lysons, whose book on "our British Ancestors" he eulogises. After this comes what he calls a vocabulary, in which he gives an explanation of the signification of all Biblical proper names, which commences from A to J inclusive; the rest of the alphabet being reserved for the second volume. In this part of the work are introduced many dissertations on subjects which are of considerable theological importance. For example, there is an article upon ANGELS, in which the author attempts to show that the very notion of the existence of such beings is founded upon a degrading idea of the nature of the Almighty. He shows that the Creator of the Universe, who is omnipresent, cannot require any beings to go to a distance on His business; that to suppose that He requires messengers is to place Him in the same category as an earthly monarch who sends ambassadors to other kingdoms than his own. This anthropomorphic notion is then traced from the Jews to the Babylonians, and a pertinent query is put whether the latter people can be regarded as heathens, pagans, or idolators, when it is found that articles of Jewish belief, which are to be found in our Bible, and so regarded as inspired truths, are drawn in reality from the priests of the kingdom of Nebuchadnezzar. Attention is also drawn to the corollary which follows from the foregoing, viz., if the Jews drew their inspired beliefs from Babylonians, it is clear that the latter were the people of God, and the depositories of His revelations before the Jews were. Dr. Inman concludes this article by instituting a comparison between the Jewish and Christian belief in archangels and angels, and the Græco-Roman faith in gods and demigods. In comparisons such as these he frequently indulges; and they almost always compel the thoughtful reader to lay down the volume, and submit his mind to a rigid cross-examination. The *tu quoque* style of argument so captivating to polemics, is here rigorously applied to those who think well of themselves but despise others. In this he resembles a writer who remarks, "thou who sayest a man should not steal—dost thou steal, etc.?" The book, indeed, is a continuous protest against the self-laudation of British religionists, and the senseless idea that the Almighty did favour the Jews, and now regards the Christians as his only legitimate offspring, to the exclusion of all the world besides. In what way, asks our author in one part, can we fairly discriminate between Elohim and Jupiter, Juno and the Virgin Mary. The first is represented as loving Israel as a man loves his wife; as being jealous, furious, avengeful, planning a design, changing His mind, and then cheating Himself: *e.g.*, He makes man, then determines to destroy everything living by a flood, and then contrives an ark by which his intention may be frustrated.

The Greeks never represented Zeus as doing such an absurdity as this. Again, we see Elohim, as three men, coming to visit Abraham; their special mission being to inquire personally into the character of Sodom and its neighbouring towns. These men eat and drink, and promise a son to an old man who entertains them. In like manner, Jupiter, as three men, go to visit another old and childless being, and give him hopes of offspring, even though he has no wife. The ancients gave no title to Juno which is not now given to the Virgin Mary.

Another point in Dr. Inman's work which strikes our attention, is the impartial style with which he analyses the characters whom he draws. In all the theological works which we have read, we have always noticed that the method of criticism applied to Scripture worthies differs wholly from that applied to other people. Thus, Abraham being once called "the friend of God," and "the father of the faithful," is treated with a tenderness, and his failings are covered with a gauze, which is never used with Búdh, Julius Cæsar, Alexander, or our own Queen Mary. David also being once styled the "sweet psalmist of Israel," is weighed in a very different balance from Ahab and Jezebel. In no instance does our author allow himself more than one standard, that of morality, justice, or right. Led by this, the accounts which he gives of Abraham, Isaac, Jacob, David, Isaiah, Jeremiah, Hosea, Daniel, and others, are as unsparing as if he were giving a biography of Alcibiades, Norman William, Mary Tudor, Napoleon, Fra Diavolo of Naples, and Jack Sheppard of England.

In his description, for example, of Jeremiah and the doctrines enunciated in the writings which pass by his name, Dr. Inman points out the utter absurdity which pervades them,—his remarks may be summed up thus: Jeremiah preaches to the Jews that all their miseries come from God in punishment for their sins: that if the people repent, victory, power, and plenty shall return to them. In other words, that prosperity is a mark of God's favour and adversity of His displeasure. If this doctrine be true it must follow that the enemies of Jerusalem were the friends of Jehovah, and that one on whom his displeasure rested, and who was consequently a bad man, was "the man Christ Jesus." From the same assertion we infer that the early Mahometans were dearer to God than were the Christians.

Amongst the essays which have arrested our attention very forcibly, are two upon HEAVEN and HELL. In the first of these the author remarks that the idea of future rewards and punishments did not obtain amongst the Jews, who borrowed it from the Persians and others; consequently it follows that our notions being founded upon sources wholly pagan, must either be valueless, or, if valuable, they must prove that heathens (so-called) are not pagans. Considerable

stress is then laid upon the description given of HEAVEN by divines, each filling it with the delights which the inventor most coveted—thus Mahomet makes the abode of bliss a spot where sensual pleasure is unbounded and eternal. The music-loving and covetous Jew peoples it with harpers and singers, golden palaces and jewelled dresses ; whilst the Christian makes one of the delights of his heaven the power of watching throughout eternity the tortures of those who opposed him during “time.”

We have also been very greatly struck by the forcible manner in which Dr. Inman occasionally enunciates a broad truth ; for example, he makes the remark that the Bible positively paints God and the Devil as the same individual, and he illustrates his meaning by referring to the pillar which intervened between the Egyptians and the Jews, and which was darkness to the one and light to the other. Just so the God who enabled David, Joshua, and others to ravage, ravish, and torture their enemies, was to those enemies a demon of destruction. What indeed is even the christian idea of the Almighty but of one who is loving to His friends, but who “plays the very devil” with His adversaries.

In the article on Hell, Dr. Inman has a passage which we here reproduce :—

“These thoughts lead us onwards to the consideration of the future condition of animals in general. It is quite as reasonable to conclude that horses and rats have a future existence as that worms have. We are told that in hell there is a worm that never dies ; we find too that the prophet Zechariah is a witness to an angelic vision, wherein a man is seen riding upon a red horse, which was followed by other horses that were red, speckled, or bay, and white ; and Zechariah is told by the Angel these were sent by the Lord to walk to and fro throughout the earth (chap. i, 8-11). We find additional evidence that horses exist in heaven from the Apocalypse of St. John, wherein the angel declares that “he saw and behold a white horse, and he that sat on him had a bow” (chap. vi., 2). In other places he speaks of a red, a black, and a pale horse (chap. vi., 4-8). Now it is perfectly clear that if John really saw what he says that he did see, horses must exist in heaven, and if so it is quite as reasonable to conclude that they came from earth as that they were created in the sky. It is equally certain that in the mediæval representations of hell there were numberless animals introduced whose business was to torture disembodied spirits, which the skill of Romish artists represented as material. There is not a single argument in Butler’s *Analogy of Religion* which does not apply as forcibly to all the lower animals as it does to mankind. The Indian peoples his future paradise with horses and dogs—the Christian adorns his heaven with golden harps and rivers of pure crystal, and the one idea is just as reasonable as the other.

“Now let us for a moment allow that there is a future for lions and

lambs, tigers and oxen, wolves and sheep, horses and dogs, we then have to examine the question, Do the vicious horses and dogs go to hell, and those who take to training kindly go to heaven? Do the spaniels and the domesticated dogs go to the good place, and the curs and savage mongrels to the bad? Or can one dog who has been vexed with another send him to the bad, whilst he himself takes to the good quarter? Can the murdered ox or sheep send the fierce lion or tiger to hell and go itself to heaven? To put these questions is to answer them; can we assign any greater power to man that is a worm?" pp. 577.

There is a still stronger blow dealt to the current Roman and Anglican doctrines respecting hell, in a note on pages 562-3, in which Dr. Inman denounces that *odium theologicum*, the indulgence of which forms an element in the christian's idea of heaven—the idea that hell is made to enable divines to indulge in an eternal revenge is indeed awful.

This quotation will give to the reader an idea of the author's way of handling his subject. He does not so much dogmatise as suggest; he does not assert nor does he flatly deny, but he puts a question in such a manner as to do all this. He nowhere asserts the unreality of heaven or hell, but he insinuates that no man, nor any body of men, has any power to send a fellow-being either to the one place or to the other—he denies that man has any influence whatever in the unseen world. To remove such assumed power from human creatures Dr. Inman appears to consider as a part of his mission in life; he clearly has no sympathy with those hierarchs who are perpetually saying in language of greater or lesser delicacy, "you go to hell" to each who differ from them. In an article on "Inspiration" the author thus speaks of such men and of the book on whose authority they indulge their cruel dispositions:—

"But it must still further be noticed that one of the necessary accompaniments of insufficient education in the leaders of religious thought, is the constant tendency in the interpretation of the "Word," which is said to be inspired, to lean to the animal propensities of men rather than to appeal to their better aspirations. Some preachers desire to be real Boanerges, or sons of Thunder, and rouse the passions of their hearers by flaunting before them the zeal of Moses, who ordered the murder of some thousands of his followers when being of heresy they thought more of a figure than of the unseen God Others of a more revengeful disposition quote authoritatively such passages as "Happy shall he be that rewardeth thee as thou hast served us." (Ps. cxxxvii., 8, 9),—and after two pages of illustration of this style of pulpit orators Dr. Inman remarks—"Surely when we find that the Bible lends itself so readily to the justification of murder in a religious cause, and adultery as a sacred emblem, and when we find that it contains a selection of such abusive terms as deserve the modern name

of 'Billingsgate,' it is justifiable for us to consider it to be the word of man rather than the inspired outpourings of the Almighty."

This is a matter of opinion. It is beyond our province or that of Dr. Inman to make such a generalisation. We think we have now said sufficient to give our readers some idea of the scope and object of this most important and interesting work. We know of no modern work which is more interesting to the student of historical anthropology than the one now before us. Dr. Innian is one of the men of the time, or perhaps more correctly, one of the men of the future. His work we commend to the attention of the students of theological and philological mythology.

Having examined the names explained in the vocabulary, we find that they may be thus classified. Those which refer to God as the almighty, inscrutable, omniscient, and omnipotent; those which refer to the sun as His minister; those which refer to the moon; to the heavens; to the planets; those which refer to the lingam chiefly; those which refer to the yoni; those which evidence an adoration of El; of Jah; of Shaddai; of Adonai; of Baal; of Bel, Asher, Gad (the Phœnician Venus), Astarte, and a variety of other names given to the Supreme. We must also notice an important note in which Dr. Inman, (on the authority of the Rev. Dr. Ginsburg, whose dictum on this subject carries overwhelming weight,) states that the Jews, in comparatively modern times, have intentionally altered the text of their Scriptures with the definite intention to make what is called the sacred record and the inspired word of God square with Hebrew ideas. In this the ancient "people of God" resemble the moderns, who assume the power of suppressing or altering the sense of any passage which they dislike. The God who changes not is thus declared to have two minds—the one announced in the Old, the other in the New Testament. The first is in reality regarded as the result of "His prentice hand," the second of His maturer judgment.

BARNARD DAVIS ON CRANIOSCOPY.*

THE long expected volume which contains a catalogue of the author's magnificent collection of skulls is now published; and it behoves the student of anthropological science to give some notice to the large

* *Thesaurus Craniorum*. Catalogue of the Skulls of the various Races of Men in the Collection of J. Barnard Davis, M.D., F.S.A., Membre Assoc. Etrang. Anthropol. Soc. Paris, Moscow, and Spain; V.-P.A.S.L., etc., etc. London: printed for the subscribers, 1867. 8vo, pp. xvii, 374.

series of interesting facts which Dr. Davis has now published to the world.

Shelton, in Staffordshire, is heard of to the English traveller as a *terra incognita*. There are few amongst the voyagers who watch that foretaste of Pandemonium, called the Potteries, as they rapidly cross the fields which present successive fiery volcanoes of blast furnaces, that know, or would care to know, that the largest collection of skulls in the world is in their immediate vicinity. Since the year 1848, Dr. Barnard Davis has, at his own expense (aided, in one case, by a grant from the British Association for the Advancement of Science), formed a collection of more than 1,540 human skulls, preserving, in each case possible, records of the race, sex, probable age, condition (as *e. g.* whether a "calvarium," a "calvaria," or a "cranium,") even of the principal measurements, and a short description. These are embodied in the work before us. The collection is founded, in part, on a number of skulls which belonged to a notorious phrenologist, named Deville, of the Strand, and comprises donations and purchases from the majority of private travellers and collectors. We regret that so superb a collection should be buried at Shelton. So long as it is preserved in so out-of-the-way a locality, so long will many English cranioscopists be debarred from inspecting it in detail. It is necessary to centralise our national collections of crania. The Royal College of Surgeons' collection is now practically useless for any purposes of scientific comparison, inasmuch as the order in which Prof. Owen left the museum in 1856, is now neglected; and there appears to be no convenient interleaved catalogue now extant, accessible to students in the public room, containing descriptions of the numerous additional crania collected since his time. Whether such a catalogue is ever to appear, even as an appendix to the long-expected *Crania Typica* of Prof. Busk, we know not; and in the meanwhile we wait. The British Museum collection is nearly as inconvenient to study as that of Lincoln's Inn Fields; and has the extra disadvantage of being composed of skulls filthy with dust, and in a dark cellar. To our certain knowledge, many months at a time pass over without this collection being consulted, although many of its specimens, *e.g.*, the Sacrificios skulls, the Australians, and the Etruscans, are of the greatest interest. The museum of the Anthropological Society of London contains, we believe, more than 190 skulls, one or two of which are almost unique in interest. The "Australian," presented by Dr. Canton, is, according to the opinion of one of the greatest anatomists of France, one of the lowest human skulls ever depicted. The negro skulls presented by Messrs. Dendy and Harris, are most typical of the West African negro. Such gems as the "Louth" skull are of the highest importance in

defining the limits of what has been called Neanderthaloid variation in the Celtic race ; whilst the "Hova" and the "Armenian" present examples which cannot easily be matched in any scientific collection. We regret that no descriptive catalogue of this collection has yet been published ; and that the Council have not yet been able to carry out their intention of having a proper exhibition case for these skulls, the expense of which would comparatively not be very great. It might be even advisable that the special subscription which some years ago was opened for museum and library purchases, should be revived ; and thus individual liberality on the part of the members would supply the great need which now exists for the proper and cleanly exhibition of this magnificent collection.

We take the following figures from Dr. Barnard Davis, as showing the relative number of crania in the principal European collections at the dates affixed to them. Of course, the estimate is purely approximate. The Galerie Anthropologique in the Jardin des Plantes, and the Museum of the Anthropological Society of Paris, are, we see, not included, as no catalogues are yet published. Still, some definite ideas are conveyed by the following figures :—

Name.	Describer.	Number.	Date.
Shelton.	J. Barnard Davis.	1540	1867
"Mortonian."	J. Aitken Meigs.	1045	1857
Netley.	G. Williamson.	601	1857
Moscow.	Professor Bogdanoff.	400	1867
St. Petersburg.	Von Baer.	355	1858
"Blumenbachian."	Wagner.	310	1856
Royal College of Surgeons.	Professor Owen.	266	1853
Leiden.	Van der Hoeven.	171	1860
British Museum.	Gray and Gerrard.	139	1862
Senkenbergian.	Lucae.	96	1860

To these should be added—

Anthrop. Society of London.	Undescribed.	191	1868
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From this it appears that Dr. Barnard Davis's collection is much the largest in the world ; and that this catalogue is therefore, with its elaborate measurements, its precise facts, and its stern logic of vast comparison, a work which, next to the *Recherches sur la Craniométrie*, of Dr. Pruner Bey, must, to an important extent, mould anthropological thought. Dr. Davis believes that "it will serve to prove, or to confirm the proof, if confirmation be required, of the great value and importance of craniology, and also of the diversity of the origin of man, and in this way to reduce the former to legitimate scientific dimensions, and to help in delivering anthropology from the A B C condition in which it has long been arrested." Dr. Davis might have added, by the phrenologists and ethnologists of the type of the late amiable Dr.

Hodgkin. Dr. Barnard Davis, we see, appears as a strong collector of evidence in favour of the plurality of the human race, and in powerful antagonism to the Darwinian monogenists, whose belief, we are instructed, complies with the requisites of advanced science and Mosaic theology. Dr. B. Davis's facts certainly prove a great range of variation in the form of the skull ; and so far partially bear out the theory of polygeny. Of course, the question of unity or plurality will long remain the stock subject of dispute between anthropologists.

Hoc judex sibi postulat probari.

It has been so much mixed up with the lower sort of theological speculation, that cautious *savans* rather "fight shy" of the topic. Monogeny is undoubtedly the favourite doctrine with the Darwinites, the British Association, and the female sex ; whilst too large a section of anthropologists appear to reason in the following manner :—1. "St. Paul says, 'Who has made of one blood all races of men,' etc." [which, perhaps, he does not say.] 2. "White men are white, negroes black, and in America is the 'red man' ; I know nothing more about the distinctions between any of these, but can see Chinese are not like Irishmen." 3. ["Happy thought," worthy of Mr. F. C. Burnand.] "Let us play at polygeny." And they have played at polygeny *usque ad nauseam*, without throwing the slightest light on the facts on which a theory can alone be proved. It is surely better even to be a disciple of the cautious monogenistic school of Waitz, than thus to clog the wheels of science with speculations which, in the nature of things, can never be demonstratively proved. The late Dr. Knox never pledged himself either to monogeny or polygeny. Hints he dropped in some of his later writings which rather seemed to indicate that his creed might be formulated as digenism, the light and dark races of man being vehemently contrasted. We must apologise, however, for quoting Dr. Knox. Anthropology in 1868 is not in a state to appreciate the generalisations of the far-seeing, truth-seeking Nestor of our science. It is too much the fashion now to quote Knox by the whole paragraph, and too little the fashion to try and understand him. The art of easy and facile employment of "scissors and paste" is too common now, and we can distinctly imagine the satirical shrug of contempt with which the old master would have listened to the lucubrations of some of his modern quoters and admirers. We remember when we conveyed the news of Dr. Knox's death to one then, in 1863, studying elementary anthropology, but whose brazen voice has since rang through Europe on the Darwinian side, that the "rising man" said of the dead lion "Oh, it does not so much matter." We go farther still, and say it is a good thing that Robert Knox is taken away from this world of small and selfish thinkers.

But the epigram we have already quoted reminds us that—

“Non de vi neque cæde, nec veneno,
Sed lis est mihi, de tribus capellis.”

and we therefore return to our sheep.

The early British skulls, described by Dr. Davis, are for the most part identical with those figured and described in his magnificent work *Crania Britannica*, and the wood-cuts are the same as those already known to craniographers. One of the Anglo-Saxon skulls (260) presents features which Dr. Davis is inclined to attribute to some influence operating during life and in infancy,” in opposition to the theory of Dr. Thurnam that it was posthumous. Dr. B. Davis considers it “clear that the distortion is artificial, and that it is likewise rendered more than probable that the Teutonic tribes at times adopted that very mode of deformation of the heads of their infants, which was practised by many American nations.” He further concludes that “the opinion that the greatly distorted crania found in Austria and Switzerland, and regarded by Retzius and Fitzinger as those of Avars, are really the relics of people of the soil, may now be considered to have received the confirmation anticipated.” The plate he gives on page thirty certainly seems to bear out this interpretation. We are not aware that Tacitus, or any ancient writer on the early Germans, gives any account of artificial deformation being practised by the Teutons; this objection, however, proves little, as we know from experience how difficult it is to get information from savages as to the ceremonies immediately after the birth of the young.

Another highly interesting skull is No. 317, a convict executed at Norfolk Island. The sutures are here almost wholly effaced, the sagittal and lambdoid not being traceable. “Such synostosis forms the basis of all the peculiarities of the cranium, and most likely also of those of the individual to whom it appertained That his moral state was strongly controlled by his cephalic peculiarities there cannot be a doubt.” Dr. Davis proceeds to urge the permanent separation of such miserable persons, “not as criminals but as dangerous idiots.” Cylindrocephalus and scaphocephalus will thus become “Pleas of the Crown.”

With regard to the celebrated Hythe skulls, which were described by Dr. Knox sometime ago in the *Transactions of the Ethnological Society*, it is remarked their “brachycephalism, their size, and general forms impress the eye with a close resemblance to the skulls of modern Germans. This possibly indicates a purer Teutonic extraction for the men of Kent than for those of the other parts of England; still our Jute skulls are dolichocephalic.”

No. 992 is described as “a very regular platy- and dolichocephalic

calvarium, described by Deville as the skull of Dodsley the celebrated publisher. But Robert Dodsley died at the age of sixty-one; this is the calvarium of a more aged person, of at least eighty." A publisher's skull is indeed a treasure! We remember that one of the most apish skulls we have seen is that of the unfortunate Teuton, General Würmser, in the Gall collection, at Paris; but a publisher's skull ought, in the year 1868, to be endowed with all the imaginary beauties of Blumenbach's Caucasian.

The celebrated Neanderthaloid skull (No. 1029) is figured, and Dr. B. Davis actually takes the trouble to reprint his note condemnatory of the opinions and annihilating the facts of Professor Huxley. Dr. Davis has already circulated this note sufficiently amongst English *savants*, and can say in the words of Professor Huxley (preface to Dally's translation of *Man's Place in Nature*, p. vi.): *La polémique est close, tous les anatomistes loyaux et compétents se sont depuis longtemps déclarés en ma faveur.*" This is not a time for Dr. Davis "thrice to slay the slain," or to attempt to pour water upon the murine that has already long been asphyxiated. We hope to hear no more of the Neanderthal skull, at least on this side of purgatory.

No. 1025 is the calvarium of an Irishwoman "found in a peat bog, county Wicklow, greatly shrunk and entirely converted into leather." The same conditions are also presented by No. 680.

Two Etruscan and one Oscan skull are in this collection, the cephalic indices of the two former being .83 and .80, and of the latter .79. The great tendency to brachycephalism of these early Italian races has been often urged by Dr. Pruner-Bey, who although he may perhaps exaggerate his theories, is entitled to the credit of being the first who actually *proved* the brachycephaly of the early Italian races. The subsequent researches of Nicolucci and others have placed that on a firm basis, which Pruner-Bey had only sketched out.

Many instances of the "derde gewrichtsknobbel" (*Condylus tertius*) are cited by Dr. B. Davis, the most interesting perhaps being the skull 1050, an Italian, which presents an articular surface on the point of the accessory condyle, which has articulated with the processus dentatus of the epistropheus.

There are twelve Swedish skulls in the collection; their average cephalic index is .75. All are dolichocephalic. In nine Lapp skulls the average is .80. Retzius gave .86 as the average of sixteen genuine Lapp skulls. We believe that the researches undertaken by Dr. Hunt, and which we hope to see soon published, indicate an extremely wide range of brachycephaly, and even of brachistocephaly, amongst the Norwegians. Dr. B. Davis does not seem to possess any Norwegian skulls. A Dalecarlian has .75, and an "old Norseman" from Lough Larne C. Antrim .73 as the cranial index.

Thirteen Veddah skulls, from Ceylon, are in this collection, a larger amount than we believe exists elsewhere, as well as twelve Cingalese. These are of great interest.

The Affghan skulls (six in number), "do not afford craniological support to the Jewish origin of this turbulent race." The whole part of the present work relating to the characteristics of the skulls of the various Jewish races is most interesting, comprising as it does an enormous series of skulls from every part of Judea. Our space, however, precludes a minute analysis of this work. We perceive that Dr. Davis is in strong opposition to Professor Owen with regard to the resemblance alleged by the latter to prevail between the Nepålese skulls and those of the lower graveyard skulls of Great Britain. We transcribe Dr. Davis's argument :—

"The limitations of the Mongolian forms, and the variations they manifest in the different races in which they prevail, are not at present understood. It is possible that the crania yet to be enumerated in this catalogue may serve materially to increase information upon these points. The differences upon which their distinction rests are anatomical, yet deserve more to be regarded as diversities of proportion than as true organic differences. Still, they are not the less important or the less deserving of accurate discrimination. The differences between man and the anthropoid apes may also be viewed as merely differences of proportion. Hence, until the notions of those who have schooled themselves to regard such diversities to be owing to secondary causes merely, and to be unessential, are established, the differences of proportion which distinguish the skulls of the various races of men are fit subjects for minute study and deserving of high estimation ; for it may safely be said, with them are intimately connected every gradation of structure and function between the lowest savage and the highest European. Professor Owen maintains with great force and justice, yet it seems scarcely in conformity with his own principles, that the modifications of form and size which distinguish man from the anthropoid apes, are 'structures peculiar to, and characteristic of, human kind.' He does not consider his position to be invalidated when it is shown that the anthropoid apes have similar structures but of different proportions. With the same propriety it may be said that the conformation and features of the sub-Himalayan skull are peculiar to and characteristic of the aboriginal races found there. The argument is the same in both cases, and if valid in the one, must be so in the other."

The African skulls in this collection are of great interest. Dr. Davis contributes a most valuable note on the variety of the modes of torturing the incisor teeth, either as tribal marks, from caprice, or from fashion. He wonders that, "the chippings and filings practised on the

teeth of African tribes are much more superficial than those of the people of the Indian Archipelago, among whom the erosions frequently denude the dentine, and even pass through it to the pulp cavity."

The series of skulls for North and South America is of the greatest importance ; at the same time, with regard to all skulls from Ecuador, Peru, and Bolivia, we would warn Dr. Davis, as well as other writers on the subject, that Mr. Squier, of New York, has in preparation a series of known facts for publication, which will overturn some of the rash theories as to the antiquities and Ethnology of South America. There is no subject on which the sciolist, or the pretender, can so easily generalise. A deceased and eminent anatomist used to be fond of saying, "If a man prove himself mentally incapable to study any branch of biological science with profit to himself or readers, let him write on ethnology." This may or may not be severe, but if it is true, South America affords a vast field for the exercise of the imaginative faculty. *En passant*, before Mr. Squier altogether clears out this Augean stable, we notice that Dr. B. Davis administers a severe *coup de grâce* to Dr. Daniel Wilson, with regard to Peruvian skulls on page 247.

The Australian skulls here described are especially noticeable for the resemblance which some of them, especially those from the Adelaide tribe (fig. 79, p. 259), bear to Prof. Huxley's Neanderthaloid river-bed types. That there is a certain rough resemblance between some river-bed skulls and some Australians is indubitable. That anything herein is shown but the demonstration of Meigs's law of homiokephalic representation we deny.

Dr. Davis's intimate connection with Dutch Anthropology has enabled his correspondents at Batavia to supply him with many most interesting skulls from Polynesia, amongst others one a Fatean (figured by him in his memoir on the peculiar crania of the inhabitants of certain groups of islands in the Western Pacific, pl. ii, fig. 1 and 2), "a remarkably and exceptionally low prognathous skull, with inordinately large mouth and jaws ; in its general form closely resembling the elongated distorted crania of the early Peruvians, but without any artificial deformation. The alisphenoids are wholly excluded from the parietals. The most pithecoïd cranium in the collection. The very *beau idéal* of the skull of a savage." The plate referred to of this skull certainly shows one which resembles closely some of those figured by Vogt, in his late magnificent Memoir on Microcephaly ; but we are sorry to see in Dr. Davis' controversial note on this skull, a severe and unmerited criticism on Prof. Owen's words, "prognathism is probably concomitant with late weaning of the infant." This, Dr. Davis seems to imagine, means that the late weaning

of the infant produces prognathism ; his dread of " Darwinism, &c.," seems to have led him to forget to take down his "Johnson's Dictionary," which would have told him that concomitant meant "conjoined with, concurrent with, coming and going with, as collateral, *not causative or consequential*." Such a slight precaution might have induced him not to pen the superfluous note on his 312th page.

Such a trifling defect as this, however, does not seriously detract from the merits of this magnificent contribution to anthropological literature. The valuable tables at the end, and the general spirit of honest inquiry, critical thought, and careful and learned erudition, all tend to render this work one of the most useful in the hands of all who study the manifold and various diversities of crania in the races of man.

C. C. B.

ANTHROPOLOGY AND ETHNOLOGY.

A Letter from JOSEPH BARNARD DAVIS, M.D., F.R.S., F.S.A., V.-P.A.S.L.

SIR,—During the late discussion of an amalgamation of the two London Societies for the study of the science of man, which seems to be so desirable and natural, and so likely to be beneficial to all those who take an interest in this study, and would relieve country members like myself from the necessity of paying two subscriptions instead of one, I was particularly struck with the warmth and tenacity manifested for the retention of mere names.

The science has acquired the denomination of *Anthropology* in every part of the continent, in America, and in Britain. There are now Anthropological Societies in Paris, in Moscow, in Madrid, in New York, as well as in London, and also in Manchester. There is a Professor of Anthropology attached to the Jardin des Plantes, who has written a most elaborate report on the progress of anthropology. There is an *Anthropological Review* published in Germany, as well as one in London. And the term anthropology has become too extensively diffused, being understood as the proper name of a distinct new science, so fashionable or popular, that there is no hope of altering it. Whether rightly or wrongly, the science will inevitably for the future be called anthropology, whether we take it in good part or not. Perceiving this, and regarding names for no more than they are worth, I was rather surprised to find some of the more accomplished of its cultivators carried away by their feelings, and condemning the term as if it could not be tolerated. I was told by one friend, who ap-

peared to regard it as a very objectionable name, that Anthropology has been used in various senses quite different from the one now attributed to it. This is undeniable, but has no prejudicial influence on its present recognised meaning. Might not the same objection be made to the name chemistry? I have a book entitled *Lectures on Anthropology*, by Prof. K. E. Von Baer, which is devoted to anatomy and physiology; another of the same kind, by the late Prof. Rudolph Wagner, which is still worse, entitled, *The Natural History of Man. Handbook of Popular Anthropology*. The gentleman above alluded to assured me that the name *ethnology* was selected at the formation of the Ethnological Society, after much deliberation and discussion, with a full appreciation and acknowledgment of its fitness to embrace and express the proper subjects of the science. I take his authority to be quite sufficient for this statement, although so little is on record upon the point.

I rather think this name took its rise in the "Société Ethnologique" of Paris, established in the year 1839, for "the study of human races according to historical traditions, languages, and the physical and moral traits of each people;" which Society was the result of the efforts of Dr. W. F. Edwards, and of his classical work. In the preceding year, the Society for the Protection of Aborigines was formed in London, and its founders exerted themselves to get a similar society established in Paris. This object could not be accomplished; but the French *savans*—whether they perceived the futility of the protection society it cannot be said—were willing to found a society for a scientific object. This they named "Société Ethnologique."

It was not till the 7th of February, 1843, that the "Ethnological Society of London" was started, at a meeting which took place at the house of the late Dr. Hodgkin. At this meeting an essay, by Dr. Ernest Dieffenbach, who had just returned from his travels in New Zealand, was read, on "The Study of Ethnology."* In this essay he says, "Ethnology begins with ethnography, with an authentic description of the physical condition of each nation: and for this purpose it will be necessary to collect everything that will throw light on this

* *Journal of the Ethnological Society of London*, vol. i, 1848, p. 15. Possibly one reason might have influenced the founders of the Ethnological Society, which was in some measure a scientific offshoot of the Aborigines Protection Society, for not adopting the name Anthropological, in the fact that at the time there already existed a society calling itself the "Anthropological Society of London." This society, which never rose to any importance, was a sort of Phrenological Club. It was started in February, 1837, and had five years of activity, merging ultimately in the "Christian Phrenological Society."

subject." He evidently considered this description should be based on the anatomical and physical characters of these nations, as he says immediately after, "It is not sufficient that authentic skulls should be collected of all races, or casts of such ; but whole skeletons." It is obvious, from an announcement which appeared in the *Medical Times* of February 11, that the whole of the vast subject of the natural history of man was designed to be included in the scope of the new Society ; that the publication of papers, the formation of a museum and of a library, and the rendering pecuniary assistance to travellers, were all contemplated.

Not long after the formation of this Society, Dr. Hodgkin read a paper "On the Progress of Ethnology." The opening sentence of this paper showed that he had no prepossessions against the name by which the science is now designated, and is not calculated to encourage the notion of those who maintain the superiority of the name of ethnology ; for the principal founder of the Ethnological Society expresses himself thus : "The study of man in its most extended sense, to which the term anthropology is fitly applied, is a most complicated subject, etc."*

On the 22nd of June, 1847, Dr. Prichard, the then President of the Ethnological Society, delivered his anniversary address, "On the Relations of Ethnology to other Branches of Knowledge," in which he makes this remark, which should be borne in mind when we come to the statements I shall have to make by-and-bye : "Prof. Blumenbach was, in reality, the founder of ethnology," so that it is clearly Blumenbach's science, whatever that is. Prichard does more, and goes further ; he undertakes the definition of ethnology, where we shall see his conception of its meaning. "Ethnology is the history of human races, or of the various tribes of men who constitute the population of the world. It comprehends all that can be learned of their origin and relations to each other. It is distinct from natural history, inasmuch as the object of its investigations is not *what is*, but *what has been*. Natural history is an account of the phenomena which nature at present displays. It relates to processes ever going on, and to effects repeated and to be repeated, so long as the powers of nature, or the properties of material agents, remain unchanged. Ethnology refers to the past. It traces the history of human families from the most remote times that are within the reach of investigation, inquires into their mutual relations, and endeavours to arrive at conclusions, either probable or certain, as to the question of their affinity or diversity of origin."† If this be a true conception of ethnology, there need be no

* *Ibid.*, p. 27.

† *Ibid.*, p. 302.

hesitation in saying that it is a much less comprehensive term than anthropology. Most likely Prichard did not think it applicable to the whole subject of the natural history of man, as he has explained in the above passage, but rather to the history of races, and hence he has, I believe, avoided the use of the word ethnology. In his well-known dedication of his great work, *Physical Researches*, to Blumenbach, he speaks of Blumenbach as the first explorer of that department of knowledge to the cultivation of which the book is devoted. In this work Prichard frequently makes use of the word "ethnography," but I am not aware that he employs either ethnology or anthropology.

In the publications of the Société Ethnologique de Paris, the first place was devoted to a reprint of Dr. W. F. Edwards's, "Caractères Physiologiques des Races Humaines." It is particularly worthy of notice, that the second paper of the volume is also from the same pen of Dr. W. F. Edwards, then the President of the Society. The title of this paper is, "Sketch of the Actual State of Anthropology, or the Natural History of Man." In this memoir, which appears to have been read soon after the formation of the Society, the author uses the word anthropology in the sense of the natural history of man. "L'Histoire naturelle de l'homme, ou anthropologie," and he never recurs, save on one occasion, to the word ethnology. This is when he reverts to his own essay on the physiological characters, where he uses this remarkable expression. "Il n'y aurait pas d'ethnologie si les races ne pouvaient pas durer un temps illimité. Il est évident que ce principe est sous-entendu dans tous les ouvrages ethnologiques." We might suppose that Dr. W. F. Edwards regarded ethnology in the same light as Dr. Hodgkin and Dr. Prichard, as restrained to the history of races or nations.

We are thus, as it were, thrown back upon Blumenbach, who has been allowed, on all sides, to be the founder of the science, and are led to inquire under what term he signified the science he had originated. Neither in the first nor the second edition of his *De Generis Humani Varietate Nativa*, did he employ either of the terms anthropology or ethnology. In the preliminary remarks to his first *Decas Craniorum*, he uses the word "anthropological" in its present sense, and also speaks of his "apparatus anthropologicus." This decade was published in 1790. It seems reasonable to conclude that previous to this time Blumenbach had felt the need of some general name by which to designate his collections, designed to illustrate the Natural History of Man, and had appropriated the denomination "anthropological," which may have been employed in different senses previously, to this purpose. We shall find that ever after this period he applies this term to them. Blumenbach, like other great men before him,

when he began to collect skulls and other objects to elucidate the natural history of man, had no notion of founding a new science ; and never, at any period, formed a positive conception of such a science as we understand it, or spoke distinctly of it. It was left for his disciples to name the department of knowledge, the cultivation of which he first explored.

In the fourth *Decas Craniorum* (1800), he tells us, in the opening remarks, that twenty years had elapsed since he began to form his "anthropological collection," of which, after this, he usually speaks in the same terms. But already, in the year 1795, in the third edition of his *De Generis Humani Varietate Nativa*, he had given an index or catalogue of his anthropological collections of skulls, of fœtuses, of hair, and of drawings and paintings.

It seems to me, if what I have written be correct and will bear the test of examination, that we may safely attribute to Blumenbach the original application of the term "anthropological" to those things which were connected with the science which he has the great merit of having founded. This led his followers to the term Anthropology as the proper name of the science itself abstractedly considered.

Mr. Bendyshe, in his laborious and learned History of Anthropology,* tells us that the term was first employed by Magnus Hundt (A.D. 1501), as the title to his extraordinary work on anatomy, *Anthropologieon*, printed at Leipsic. This black-letter book, in quarto, consists of 120 leaves, and is ornamented with rude woodcuts, depicting very gross inaccuracies, as one undivided lung in the chest. The intestinal canal consists of a series of Staffordshire knobs.†

Taking the account now given to be tolerably correct, it seems that we have the choice of two terms, one of which was introduced and used by the acknowledged founder of our noble science, Blumenbach, to express, if not the science itself, all that appertains to it. The other, which was selected by the French for the name of the society founded in Paris by Dr. W. F. Edwards, who, nevertheless, himself used the term Anthropology as a synonym for the Natural History of Man. This term, ethnology, seems to have been avoided by the great English writer upon the subject, Prichard, and was actually defined by him, not in the comprehensive sense in which the word anthropology is now universally used, but as merely the history, or the past, of human races. Believing all this to be true, I may be pardoned for expressing my surprise at the conclusions which my esteemed friend‡

* *Memoirs of the Anthropological Society of London*, vol. i, p. 352.

† The full title of the book is *Anthropologium de Hominis Dignitate*.

‡ Choulant. *Geschichte der Anatomischen Abbildung*. Leipzig, 1852, s. 177.

above alluded to, has arrived. Certainly, if we are permitted to have a choice of a name for a united, strong, and comprehensive society, there cannot be the slightest doubt about what that name should be. Personally, I am indifferent about names ; practically, I am about as much attached to one of the present societies as the other (whether both are equally attached to me I cannot tell), having been connected with the one about ten years, and with the other almost from its foundation. But politically, I am not fully satisfied with my decision upon this and similar points, until after the Fellows of both Societies have been consulted. Unless the amalgamation of the Societies can be made to promote the study of the science, to enlarge and strengthen all its present appliances, let us, by all means, go on as we are ; a generous rivalry is not a great evil. I, for one, as a country Fellow, am not unwilling to pay two subscriptions where one would have done ; but I must protest against an old practice in the Ethnological, now reformed, that of receiving the subscription year after year without making any return. I remain, Sir, yours faithfully,

J. BARNARD DAVIS.

Shelton, Hanley, Staffs. Aug. 8, 1868.

ON INTELLIGENCE, AND ITS RELATION TO INSTINCT.*

By M. COUDEREAU.

WHAT is man ? This is actually the highest zoological expression ; a more complex animal, which, right or wrong, is persuaded that it is more perfect than all the rest.

His existence, like that of all beings in nature, is subjected to external conditions to which he must accommodate himself on pain of perishing.

For him, as for all other beings, this condition of subjection constitutes *his wants*. The wants vary in every creature according to its form and its chemical and organic composition.

* We have much pleasure in introducing to the notice of our readers the writings of one of the many distinguished French Anthropologists who are as yet little known in this country. We cannot but think that, from this specimen of M. Coudereau's writings, our readers will be glad to know more of him. This paper is translated from the *Bulletins* of the Paris Anthropological Society, and is slightly abridged.—EDITOR.

Every creature is guided towards the means of satisfying its wants by a special faculty which is the corollary of its wants ; this is *instinct*. In every creature the instinct varies according to the organic and chemical composition of the individual, according to the form, the functions, the number and the grouping of its organs. Identity of conformation necessarily involves identity of wants and of instinct.

In running through the series of creatures, from the most simple to the most complex, we see that the same organ or the same tissue imparts to the creature, to the formation of which it contributes, the same wants, the same instinct ; and that every addition of a tissue or an organ, adds a want or an instinct more to the new animal.

I say "organ or tissue," in fact, in the most simple creatures in which life is scarcely yet manifest, we find only a cell or an agglomeration of cells. The cell is both the whole creature and its sole organ. The manifestation of life is confined to absorption and exhalation—the might be called the cellular instinct.

Other creatures present the cell associated with other tissues, the ciliary filaments, for instance, which endow it with motion. Every new creature is composed of more and more complicated tissues ; the fibrous tissue appears, then a rudimentary digestive organ (first a sac with one aperture, then a tube with two apertures), then distinct respiratory organs followed by all other organs. The wants and instincts of each keep pace with the same progression, and the same tissues perform always the same functions. Thus the cell shows itself in every creature, and always with its faculty of absorption and exhalation. In short, I call instinct that organic force, by virtue of which an organ or a tissue performs its functions to satisfy its special wants. The instinct of an animal is the ensemble, or the sum of the instincts of its different organs.

Where does instinct end ? where does intelligence begin ? It seems to me very difficult to fix the boundary. I shall call intelligence the faculty by virtue of which the animal may, by making use of its will, combine two or more of its individual instincts, for the satisfaction of a want of which it is conscious.

It is in this way, as G. Leroy and M. Toussenel have observed, that animals frequently seem to perform acts by instinct which are certainly due to intelligence. Although in general the term "intelligence" is applied only to man, it appears to me evident enough that both the animal and man possess instinct and intelligence, and in my opinion man could possess no intelligence but on the condition of possessing instinct.

Man is a compound of numerous organs, his faculties are, therefore, a compound of numerous instincts. His organs are more complex than those of any other animal ; it must necessarily be the same as regards his wants and his instincts.

It has been observed that the organs of the tissues of the animal economy may be modified according to the use made of them. By causing the muscles frequently to contract, their volume increases ; by leaving them for a long period at rest they diminish in volume, and may, if the inaction is, as in paralysis, indefinitely prolonged, disappear and be replaced by an adipose tissue ; the instinct of the muscle (contraction) not being satisfied induces its destruction.

For the same reason an articulation kept immoveable for a long time may terminate in ankylosis. I am convinced that we could, on the other hand, by imposing upon our limbs certain movements exaggerating the animal muscular effort, not merely greatly modify the existing muscles, but perhaps create new ones.

In persons who by practice develope the agility of their fingers, the divisions of the flexors and tensors are much deeper (especially in musicians), and I have no doubt that under the influence of constant exercise, some muscular fascicles will not merely increase in volume, but will detach themselves from a muscle to become an independent muscle. It is in this way that the proper flexor of the thumb was formed, which does not exist in most apes. What is evident as regards the muscles, holds true with regard to the brain.

Animals in general, and man in particular, may become modified or modify themselves in their organs and their instincts. The physical differences which distinguish man from the animal are striking at first sight, but after due examination the differences appear less important than the resemblances. The organs are the same as those in animals, only modified in form and disposition ; his tissues are exactly the same. From the identity of the nature of all the organs in man and animals, I infer the identity of the nature of the wants, which are the motives of them, and of the instincts which impel them to satisfy them. There are only found more or less pronounced differences in the corresponding instincts, which are always connected with the differences in the physical organs which give rise to them. Man chiefly differs from all other animals by the enormous development of his brain ; and this development is greater still, than appears at first, when we consider that the grey substance, the really active part of the cerebral matter, describes a number of undulations, and covers the convolutions.

The government of the simian tribes greatly contributes to the improvement of the species. The chief is always the best endowed male in his state, as he has only obtained his dignity by his superior prowess, agility, and cunning. The seignorial rights over the fair sex which he claims, make him the veritable father of the fatherland. There is a continual selection and, consequently, progress.

Apart from these conditions of progress, constant and successive,

are there other accidental causes? Perhaps so. Certain conditions of hyperæmia, of moderate congestion, by increasing the functions of any portion of the brain, might, in my opinion, accelerate the progress of the species.

What, in fact, is the influence which raises in us certain ideas which persist, despite our efforts to drive them out of our memory? Under what influence become our passions exalted? Are these phenomena simply due to the predominance or action of one convolution or the other? But then, the same passional phenomenon would constantly be produced in each individual, and would, at every moment of his life, dominate all other faculties. Experience, on the contrary, demonstrates to us that under different influences, the various cerebral instincts are put into action by turns.

What, then, is, in the animal economy, the agent which thus transports the dominant action now to one, now to another organ? I look upon the circulation as being this special agent, without attempting to explain this variability of the circulation. I believe it due to reflex action; a sort of reaction which results immediately from an external or internal impression, like that which makes us blush or grow pale, by reacting on the capillary circulation of the face. I base my opinion on the circumstance that, under the influence of a languid circulation, the function of the organs becomes weaker, or may cease altogether. On the contrary, by augmenting the circulation, the action of the organs is also augmented. When, for instance, we are exposed to great cold, the circulation is nearly nil in the fingers; the sensibility diminishes, we can scarcely grasp an object, and even the lips refuse the articulation of sounds. This applies also to the brain. The retarded circulation diminishes the action of the nervous centres, and this diminution may lead to syncope.

The augmentation of the circulation exaggerates the action of the cerebral faculties. Excess may induce delirium; beyond this, apoplexy may ensue. The morbid afflux of the blood to the convolutions determines, according to the condition in which it takes place, delirium, mania, insanity, apoplexy. Confined within the limits of health, it may give rise to genius. The richness of the capillary net in several parts of the brain is an element which, in my opinion, has not sufficiently been taken into account in the study of the nervous centres, and which ought to have a place by the side of the development of the convolutions and the measurements of the crania.

As already stated, cerebral gymnastics tend to increase the volume of the convolution exercised; but that which precedes and determines the augmentation of the volume, is the greater action of the local circulation, a greater richness of the capillary net. In the adult the

cranial parietes resist the development of the convolution, and the progress may confine itself to the augmentation of the vascular net, and terminate only in the augmentation of the volume in the descendants, inheriting the paternal active circulation, and in whom the flexible parietes of the cranium will permit the consequent development.

I consider, in our first parents, as an agent of progress, every cause tending to enrich the capillary net of the brain, and thus to increase momentarily or constantly the circulation.

I have said that man had to create his language; he was also obliged to extend it in order to express his ideas in proportion as they increased. But man is not alone in possessing a language. All species of animals possess one, varied, but sufficient to express their ideas. Most of them possess only the cry; but they give to it, according to circumstances, and according to what they wish to express, a special character. They vary the *timbre*, repeat, shorten, or lengthen the sounds. They also possess gesture; showing, by their attitudes, what they have to say. And animals of the same species always understand each other.

Allow me to analyse, for a moment, the language of a member of our poultry-yard. When a certain number of pullets peaceably feed together, scratching the soil, you hear a monotonous chirping, a series of incoherent co-co-cos, which remind one of the tittle-tattle of old gossips. But now the breakfast hour draws nigh. The first which feels hungry raises its voice; every syllable uttered is followed by a special rolling. Its companions understand the call, and make a chorus; and all proceed to the habitation of their mistress, loudly proclaiming their wants. A bird of prey hovers above them. They emit a long cry—the cry of fear. Soon another cry is heard, as long, but more acute than the first—it is the cry of pain. The bird of prey has seized one, and carries it off. At another time you hear a festive cry; the hen has laid an egg. You may hear this song also in another diapason. It is the sound of anger, of indignation; the hen finds her nest occupied by a rival, *inde iræ*.

The hen now becomes a brooder; she understands all the duties of maternity. She likes even her future progeny, and speaks to it in a language she never used before. It is now a cluck. When, for a moment, she quits her eggs to take food, she returns as soon as possible, her cluck is a busy cluck, and she picks away at her companions, who would make her lose time; but her companions understand her reasons and respect them. The chickens are now hatched. The cluck is louder, prouder; it says, "I am a mother!" She calls her brood. A dog now approaches; the cluck becomes rapid, telling

her chickens that there is danger and that they should run. Her cry thus varies in character, according to the imminence of the peril, from a simple admonition to extreme terror.

When she finds a choice morsel, she breaks it with her bill, and calls her young with a peculiar cluck which they well understand. The cock invites his hens with a similar cluck to partake of some dainty. Here we have a whole vocabulary, sufficing for the wants of the species, by means of which they are able to communicate all the ideas conformable with their nature.

Each animal species possesses a language related to its mode of life and its instincts. Their language consists both of voice and of gesture. The language of gesture is still more extensive than that of voice, especially in the higher animals ; and when they find themselves placed in a new and unknown condition, they use gestures in order to express the idea.

The dog, that faithful companion and intelligent friend of man, does he not by his expressive gestures make known to us what he wants? Let us observe him in moments of joy ; how expressively does he manifest the pleasure of seeing his master after a long absence ! what rejoicing in his bark, his bounds, his caresses ! What eloquence is there not in his attitude, his profound grief, when his master is angry with him ! I cannot but repeat that popular (not vulgar) phrase, he only wants speech. The play of the physiognomy, which with gesture constitutes mimics, plays a certain part in the language of animals. Concentrated in the action of skin, muscles, which are, much more than in man, developed in the whole surface of the body ; then in the contractility of the iris, the muscles of the eye, the eye-lids and eye-brows, it extends to the nostrils and the lips (ruminants and solipeda) ; the movements of the upper lip are much more extensive in the felidæ and canidæ. The contraction of the superior lip and the nostrils expresses, as in man, anger and defiance. In the dog, especially hunting dogs, we perceive a rudimentary smile ; the ape apparently laughs.

Every animal thus possesses a language sufficient to express its ideas, not merely to individuals of the same species, but to animals of a different species. Those who have no organs of voice, make themselves understood by mimicry (bees, ants). In man the action of the skin muscles chiefly shows itself in the face. This mode of expression being thus concentrated in one locality, is stronger in him, but he does not possess it exclusively. It is more developed in civilised people ; savages are remarkable for the impassibility of their features.

It has often been repeated that man alone is in possession of what

has been called speech, and that this character alone is sufficient to distinguish him from animals; this is prejudice, which falls to the ground before sound observation. First of all, it is false that speech is due to an innate instinct of man; he does not naturally possess speech, that is to say articulate language; he has the capacity of acquiring it, that is all. If it were otherwise, there would be but one language for all men. He speaks because he hears others speak, and he imitates their sounds; individuals born deaf do not speak, because they have no model to imitate. The faculty of speaking is thus simply one of the manifestations of the faculty to imitate. Does this faculty of imitating articulate sounds belong exclusively to man? No, he shares this faculty with other animals (magpie, raven, parrot, starling, &c.); we only possess this faculty in a higher degree, as is the case with all the faculties which constitute what we call "his intelligence."

A tribe of apes more advanced than the rest in the way of progress, the individuals composing it became men, and, under the pressure of necessity, acquired, by the sole force of their will and their labour, that which they had not received from nature; speech was thus one of their first conquests. In order to account for the intellectual development of the new-born humanity, I sought for a starting point in humanity as it exists, in order to proceed from the known to the unknown. I took as a term of comparison the intellectual development of the infant. Before becoming a man the infant is an animal; it is the work of nature before becoming the product of civilisation. Nature has created it the equal of all other animal creatures; as to all other animals, nature has endowed it with organs, wants, and instincts. As to all others, nature has given it a language—not speech, but the cry which it manifests almost before it is quite born. From that moment it feels a want which it expresses by a cry; its wants are not many at first, to suckle and to sleep. They multiply by degrees, wants to see, to move, to grasp objects; all these wants and desires are still expressed by cries. These cries become modified, for the child listens and imitates; he at first imitates the intonations of the words, which he cannot yet articulate. He only, at a later period, very gradually, and with much trouble, succeeds in pronouncing some scarcely intelligible words; when about ten or twelve months old, the infant articulates distinctly papa, mamma; when two years old, he can, more or less, distinctly enunciate a phrase, but it is only in the third or fourth year that the child can be said to speak, and in order to obtain this result his desires must be excited, which are not satisfied until he pronounces a syllable, or a word; and every syllable, every new word is only acquired by great efforts, not merely on the part of the child but even in the adult. I appeal to all those who in learning

a foreign language come to pronunciations unknown in their native language. At last all difficulties are overcome, the child speaks, "he can say everything," as the nurse has it; but with such patience and care, and in so long a time, a parrot might nearly learn as much.

In the child on the road to learn to speak, there is a motive which impels him, which is his wants. The first words he pronounces are the names of persons who only study his wants, namely papa, mamma. It requires the ear of a mother to understand the musical thoughts of her child before he expresses it in articulate words. Time progresses, and the child studies, works, and becomes a man, and, like the greater part of men, after a life of work and study, each assimilates according to the sphere of his aptitudes, a portion of the requisitions of humanity. But we must not forget that new conquests are rare; most men, at all events, arrive at the term of their existence, having passed it like apes and parrots; they have imitated acts and words; imitated nothing more. Infant humanity could not have proceeded otherwise than the infant man proceeds now in the acquisition of speech. The progress then was infinitely slower, this seems the chief difference to note.

A simian tribe occupies the highest degree of the zoological scale; the convolutions of the posterior lobe of the brain have become developed, and with it the love of family. The frontal convolutions have also expanded and have enlarged the intellectual horizon. The animal has become more observant and more imitative, the modification of the organs induced the modification of wants.

The instinct of society and the instinct of observation have become developed, and created the want of communicating to each other the results of the observations and sensations. Cries and gestures were no longer sufficient, and the creation of better means became a necessity.

The primitive man, did he, as some linguists believe, possess "a language formed all at once, issued instantaneously from the genius of each race?" This proposition seems to me inadmissible; I do not think that speech is the result of "a primitive intuition," nor that in every language "grammar is a primitive fact," beyond which we cannot ascend. I do not purpose examining here the question of language from a linguistic standpoint, as this science does not appear to me capable of solving the problem as I put it.

Before the creation of the languages, which linguists have studied, analysed, and compared, there must, during many centuries, have obtained a condition about which we possess no data. We can only ascend to the cradle of language by "legitimate inductions," and as we are obliged to have recourse to hypothesis, I ask permission to say what appears to me most probable.

The primitive man, observing the cries and gestures of animals within

the field of his observation, interpreted the sense of them and imitated them to express analogous ideas. He heard different sounds of nature (of wind, thunder, rain, &c.), and translated, by a more or less perfect imitation of this noise, the impressions analogous to those he felt. The first language must have been mimicry and imitative music (Renan, *Origine du Langage*). How did man pass from this form of language to articulate speech? It must have occurred to him naturally, gradually to articulate all the sounds whilst attempting to imitate all the noises that struck his ear. The imitation of the cry of the animal became the name of that animal. The first words must have been nouns only; then by the extension of the sense or the character of the animal or of a thing, the same word became a substantive noun or an adjective, according to circumstances, with a simple shade perhaps in the pronunciation or in the gesture. The verb was subsequently formed in the same fashion by a slight modification of the primitive substantive.

The child does not proceed otherwise in the fabrication of a word he wants to communicate his impressions; in his language "burn" and fire are synonymous, and frequently employed indiscriminately; and so it is with the rest of his vocabulary.

When usage adopted conventional sounds for conventional objects, the primitive imitation of natural sounds was gradually abandoned, and the starting point lost.

How is it that all languages, though of a similar origin, differ so much? The reason is very simple. The same animal has generally different cries, and modifies ~~its~~ cries according to circumstances; each tribe gave it a name by imitating one of these modifications, whence profound differences resulted. Every primitive tribe was composed of a small number of individuals; there must therefore have been an incalculable number of primitive languages. At a later period these tribes communicated with each other; alliances and conquests caused some languages to disappear, whilst such as survived became enriched; and since the beginning the number of languages diminishes like the number of peoples, but each language becomes enriched by a number of expressions borrowed from the language to whose disappearance it has contributed; this will no doubt continue until humanity will constitute but one people, speaking the same language. In short, articulate language in man is neither an innate nor an exclusive faculty. According to G. Leroy, animals also possess an articulate language, without which they could not combine for certain acts, such as the relays in hunting animals (wolf). Man acquires the faculty of speech by his memory, labour, and imitation—the parrot does no more. From a linguistic stand-point, this faculty is in its nature identical in man and animal. Man expresses his ideas

by the aid of a language he has made his own ; all animals do the same. He can articulate sounds ; other animals can imitate sounds as well as he can. He presents simply in this respect a greater development of a faculty *common* to all social animals.

ON THE CRANIA AND BONES OF LES EYZIES ; OR, THE ANCIENT CAVE-MEN OF PERIGORD.*

By Prof. PAUL BROCA, Secretary-General of the Anthropological Society of Paris, and Honorary Fellow of the Anthropological Society of London.

No discovery could offer more interest to Anthropology than that of these bones. It is the complement—one would almost say the crowning work—of the important discoveries which Mr. Lartet, sen., and his much lamented fellow-labourer, M. Christy, made four years ago in the caverns of Perigord. The numerous objects found in these caverns have not only furnished to us the most incontestible and striking proofs of the contemporaneity of man with the mammoth, but they have revealed to us the most curious details of the life and customs of the ancient cave-men of Perigord. The anatomical characteristics of the intelligent and artistic race, whose admirable carvings and sculptures are to us a subject of astonishment, yet, however, remain to be disclosed to us. The latest researches in Les Eyzies cave, by M. Lartet, jun., permit us now to bridge this gap. No doubt can be raised as to the authenticity and high antiquity of the bones which these researches have brought to light. The stratigraphical details furnished by this gentleman, prove not only that they are as ancient as, but that they are even more ancient than the carved objects of the great cavern of Les Eyzies ; the latter correspond to the epoch in which the reindeer was already predominant among the fauna, while the former seem to approximate rather to the time of the mammoth ; and although a very long period between these two epochs might have elapsed, we are compelled to believe that the passage from one to the other took place gradually, without any ethnographical revolution ; that the same race remained without interruption in the same place ; and that, if the bones which we are about to examine, are not those of the *artistes* of the reindeer period, they are at least those of their ancestors. The remains of quaternary man that we

* This article is the most important part of a long Memoir by Prof. Broca, which will appear in Lartet's and Christy's *Reliquiæ Aquitanicæ*.

have examined hitherto, belong for the most part to individuals of short stature, in whom the cranium is of small capacity, and the face more or less prognathous. We should hence conclude that the primitive population of Europe either belonged to a Negroid or Mongoloid race (according to either hypothesis), in whom the stature did not much exceed that of the modern Laplanders. We consider that this opinion rests on well-ascertained facts. It rests also on a pre-conceived idea which we have for a long time opposed, viz., that there is in quaternary Europe only one single race of men. Based on the ethnographical theory that the diversity of the human race results from the influence of media (such as climate, food, soil, etc.) we admit that the typical differences must be effaced as we pass backwards in time; and when the polygenists objected that the separation of the principal groups of races was already complete from the origin of historic time, we replied, that it was not in very recent times, but in the immense and incalculable periods which preceded them, that the divergencies from the original type were manifested. Reduced to these terms, the question of the unity of the human race became adjourned to the moment when palæontology should have discovered some remains of primitive man, or at least those of races of the quaternary epoch. We should consider that these races, separated from us by thousands of ages perhaps, and of a certainty infinitely more approximated to the human origines than the most ancient of the historic races, must present, if not an absolute uniformity, at least a manifest convergance towards the type of the common mould in which we can conceive them to have been cast. But it happens here, as does so frequently happen in other things, that the facts brought to light contradict a pre-conceived theory.

The quaternary race of Les Eyzies, differs from the quaternary race of the caverns of Belgium, as much as the most dissimilar modern races differ among themselves. The contrast is complete, not only when we consider the conformation and volume of the head, but also when we consider the form and dimensions of the limb bones. The greater part of the bones which have been discovered belong to three individuals. There are three crania, of which one is perfect. Not one of the skeletons is capable of being put together, but in closing the bones of the trunk and of the members, in accordance with their shape, colour, and density, we are able to separate them chiefly into three groups, which, in respect of the character referred to, appear to belong to the three crania. There are, besides, some small fragments of a cranium belonging to an adult, and some others of one belonging to a child. The number of bodies deposited in this burying place was five; it can hardly be said that there were more. It is, therefore, not

impossible that all these individuals should have been members of one family. Of the relics of these five persons, we can only speak of three, the remains of the two others being represented by only insignificant fragments.

The author then minutely described the character of each of the bones, and said, if, in conclusion, we cast a general glance over the divers elements that we have just examined, we shall find in the race of Les Eyzies a remarkable combination of characters—some of superiority and some of inferiority. The great capacity of the brain, the development of the frontal region, the fine elliptical form of the anterior part of the profile of the skull, the orthographic disposition of the superior facial region (from which arises a considerable enlargement of the facial angle of Camper) are incontestable characteristics of superiority such as we are accustomed to meet with only in civilised races. On the other hand, the great breadth of the face, the alveolar prognathism, the enormous development of the ascending ramus of the jaw, the extent and roughness of the surfaces for the insertion of muscles, and especially of the masticators, lead to the idea of a savage and brutal race, and we are led to suspect that the woman has been slain by a blow with a hatchet, and that the thigh-bone of the old man bears traces of an old and serious injury. Examine again the simplicity of the sutures, and then probably equally simple obliterations, which pass before backwards, as in the case with barbarous peoples. Let us add, that the shape of the bones, and in particular the extraordinary development of the ridge of femur, indicate a high degree of muscular power. Let us review these three characteristics, the excessive breadth of the ramus of the jaw, the sub-coronoid curvature of the ulna, of which the coronoid cavity is extremely shallow, and above all the flattening of the tibiæ, are more or less manifestly simious; and we shall thus complete the picture of a race which in some of its characteristics attained the highest and noblest degrees of human morphology, and in others descended even below the most degraded anthropological types of the present day.

This antithesis, at first sight, appears paradoxical, but is it not the anatomical confirmation of that which the discoveries of Messrs. Lartet (senior) and Christy have already taught us concerning the life and habits of the denizens of the cave of Perigord. The men who, in the quaternary epoch were the initiators of progress and the precursors of civilisation; who developed the remarkable industry and wonderful arts of which we to day admire the products, must of necessity have combined with the intelligence which invents and brings to perfection, much strength of body and habits of war, and of the chase, which alone could then assure them security and subsistence. Now.

a-days, with our irresistible metals, with our terrible fire-arms, with our land cleared and cultivated for centuries, with all the resources which agriculture and commerce furnish us, we can live in peace the life of the civilised ; but in those days, when immense forests, which the stone hatchet was incompetent to fell, covered the greater part of the soil ; when, in default of agriculture, man was compelled to seek a subsistence by the chase alone ; when the immediate necessities of existence demanded a continual warfare against such animals as the mammoth ; and, lastly, when the hunting grounds, the sole resource of one tribe, would have to be defended against the incursions and attacks of neighbouring tribes, it behoved them, under penalty of disappearing from the face of the earth, to accommodate themselves to circumstances, and to live the violent life of barbarians. The troglodytes of Les Eyzies were, therefore, barbarians in common with all the human kind of their day, and we ought not to be astonished that such conditions should have been the cause of very marked impressions on the skeletons of these people. But these barbarians were intelligent and perfectible, and whilst continuing their struggle against nature and against their fellow-men, they managed to leave themselves sufficient leisure to increase their knowledge, to develop their industries, and even to elevate themselves to the cultivation of the arts. Such precious aptitudes, rare in all times, but truly extraordinary in regard to the period in which they were manifested, could only result in favour of an advance in cerebral organisation, such as that which has found a morphological expression in the skulls of the race of Les Eyzies. What became of this race so remarkable, which appears to us in that distant past like a bright light in the midst of darkness ? In cultivating the arts which adorn life and render it enjoyable, have such people lost the smallest quantity of that warlike energy which alone could protect them against the ferocious aggressions of surrounding savages ? And have they succumbed like those precursors who, having arrived untimely, disappeared, oppressed to death by the incompatible media into which they tried to introduce a premature progress ? or, indeed, surviving this inevitable struggle, in which their civilisation has perished, have they not escaped extermination only to fall back into universal barbarism ; and to lose, in the long run, under the influence of crossing, of social change, and of the gradual transformation of the fauna and the climate, the anatomical characters which formerly distinguished them ? It is permitted to hope that future discoveries will furnish new elements for the solution of these important questions ; but as yet we can assert one thing only —and that is, that the race of Les Eyzies is entirely different from any other race, ancient or modern, that we have ever seen or heard of.

ON THE PRIMITIVE FORM OF THE HUMAN SKULL.*

By Professor HERMANN SCHAAFFHAUSEN, Honorary Fellow of the Anthropological Society of London.

UNLESS man forms an exception to the great law of nature, which produces not merely a manifold and continuous alteration of the forms of life, by adapting them to new vital conditions, but shows in the plan of creation a progressive development from lower to higher forms, from the invertebrate to the vertebrate animal, from the fish to the amphibian, and from the latter to the bird or mammal, then the human form must equally have been developed in the scale of life from a lower organisation, like that which we find in the present creation in the animals standing next to us. This view is supported by the fact that the marks of a higher development, which distinguish man from the anthropoid apes, constitute by no means an immutable and fixed type, but exist in different degrees in various human races, and thus render the gradual development of these characters distinctly visible. Here the question presents itself, whether the oldest human remains of prehistoric times, which approach nearer the origin of our species, present the characters of a lower organisation. If this be so, this circumstance, combined with other observations, would form strong arguments in favour of the assumption of a natural origin of man. If such marks be not found, we are still permitted to assume that the oldest remains hitherto found do not reach so far back in time as to show an important deviation from the present organisation of man; not even from such a low organisation as we find at present in the lowest living savages.

But considering that human bones are only exceptionally dug out from graves of the pre-historic period, it is, at all events striking in the highest degree, that even this scant number of human fossils present such marks of an inferior organisation, and that, too, in regions now inhabited by the most civilised peoples. And we must also lay stress upon the point, that the proofs are in our hands; that the corporeal shape of the primitive form is, in some of its component parts, inferior to that of our rudest savages. The form of the forehead of the Neander-skull, the dentition and the form of the jaw of La Naulette, the prognathism of some infantile jaws of the stone period of Western

* A lecture delivered before the Archaic-Anthropological Congress of Paris, August 30, 1867.

Europe, exceed, as regards their animal form, that observed in living savages.

We may attempt the collation of such characters as have been observed in other parts of the human frame, in order to obtain, as it were, a sight of the perfect image of the primitive man. These characters must not be considered as accidental exceptions from the normal form, which was the common theory on meeting with such finds; for these peculiarities in the organisation of the pre-historic man do not occur as exceptions, but as a rule; and what is decisive is the circumstance that they mostly present a fœtal character, and thus exhibit an early stage of development. They also frequently stand in reciprocal dependence; one character determines the other according to the law of harmony or co-existence which governs the form of all living bodies. With the flying forehead we find, as a rule, a projecting jaw, large teeth, a high temporal line, a strongly developed occipital ridge, simple cranial sutures, small cranial capacity.

I confine myself here to collate, from a large number of very old and rudely-shaped crania, the most striking deviations from the normal form, and to compare them with the formation of the lowest races, in order to obtain an idea of the primitive form of the human skull, the whole of which we have not yet found among the ruins of the past, but which we shall surely find some day. It might not be difficult, by a similar method, to determine the original form of the other parts of the skeleton. We obtain this knowledge less by fossil finds than by the examination of the corporeal frame of living savages, who present the low state of their organisation not merely by the peculiarities of their cranial structure, but by a different proportion of the length of the bones of the extremities, by the elongated form of the thorax from in front backwards, by a slighter rotation of the humerus, the articular surface of which is more directed backwards, the perforation of the elbow fossa, the narrower pelvis with unusually vertical ossa ilii, the backwardly projecting heel-bone, the larynx approaching the animal form, and by other characters.

Most of the skulls of the highest antiquity are distinguished by the thickness of the cranial bones; this may partly be due to great muscular action, and partly to mode of life, which furnished an excess of phosphate of lime for the nourishment of the bones. The anthropoid apes have stronger cranial bones than are usually found in man; and many savage peoples, like some Negro tribes, Esquimaux and Australians, have usually very thick and dense crania. This density of the osseous tissue seems to be wanting in the Mongol race. Herodotus already mentions the soft skulls of the Persians,* and the hardness of

* Lib. iii, cap. 12.

the Egyptian skulls, and ascribes it to the circumstance that the Egyptians walked about bareheaded and wore short hair. We, nevertheless, find not rarely Mongol skulls with thick bones, in which the diploë is largely developed, containing wide cells; the bones are therefore thick, but neither dense nor heavy. Similar skulls, genuine brachycephali of the stone period, have been found near Uelde, in Westphalia; they resemble, in their general forms, the crania of the reindeer period found in Belgium. Do they by this peculiarity betray their Asiatic origin? It may be mentioned here that Blumenbach* calls a very dense, thick, and heavy Botocudo skull, the most orang-like skull of his whole collection, although some Ethiopian skulls had a more projecting upper jaw.

Smallness of the cranial cavity is a second character of the retarded development of the cranium. It may co-exist with an apparently favourable cranial diameter, because thick cranial bones, or projecting parietal protuberances, increase the width, and projection of the glabella, or of the occipital ridge, increase the length. The cast of the Engis- and still more of the Neander-skull, the casts of Negro and Australian skulls, show this peculiarity, as already pointed out by Gratiolet.

The long, narrow, nearly cylindrical form which is seen in most old skulls of Western and Northern Europe, and Northern Africa,—this decided dolichocephaly may, therefore, be held to be an imperfect and primitive form, because observations made during the growth of this skull have shown that its final increase in width is commensurate with the increase of the intelligence. The Mongol race, whose heads are broader than those of Europeans, present only an apparent exception to the law that the mental capacity is chiefly expressed in the breadth of the cranium; for the greatest width of the brachycephalous Mongol skull lies between the parietal protuberances; but the width in relation to mental capacity lies over the base of the cranium. The finds of several old skulls in Scandinavia and Western Europe may have led to the view that the oldest race of these countries was brachycephalic, like the present Lapps, who, like this tribe, lived associated with the reindeer, and spread over Southern Europe. But the Neander- and Engis-skulls, which must be considered as old, if not older, than the reindeer-men, are long skulls. In England also, from finds in the graves, it is considered that the dolichocephalic race is older than the brachycephalic. Although the succession of peoples of a different type and of different descent, in Europe, is still involved in doubt, yet certain it is, that as regards the anatomical characters, the dolichocephalic type of these old skulls stands lower than the brachy-

* Decas, vi. *Coll. suæ Cranior. div. gent. ill.* Goett., 1820, p. lviii.

cephalic, and must be held to be the original. But it is possible that it may have immigrated at a later period. As it often has happened in history, so may in these remote periods a ruder but physically stronger race have overcome a weaker nomadic people, and gradually occupied their dwelling-places.

There is a whole series of facts which proves that a very pronounced dolichocephaly is a primary and less developed form of the human skull. We see it decrease with the progress of civilisation, as Broca found in the population of France. The same observation has been made in Germany, where the old Germans, at the period of their wars with the Romans, were dolichocephalic, and differed so little in cranial structure from the Celtic or Gallic type, that we must assume the near affinity of these tribes. But at the present day most Germans, as shown by the observations of Welcker, are brachycephali or mesocephali, the latter standing intermediate between the long and short skulls. Ecker* arrived at the same result when comparing the old Alemanni with their descendants, the present Suabians, whose skulls have diminished in length but become broader. I, myself,† have shown that the human skull, during its growth, continues longest to extend in breadth, whence it follows that the breadth diameter of the cranium corresponds most with the intellectual development of the brain. This connection is also shown by the following observation. On comparing the brain of a rude Negro or Australian with that of the civilised European, or with that of a highly intellectual man, it strikes us at once that these brains differ much less in their length than in their breadth. The assertion seems, therefore, well founded, that the elongated, narrow, and, at times, almost cylindrical form of the human cranium, is the rude and primary one, which gradually disappears in proportion as the brain, by its development, increases in size, and, mostly, in breadth. These primitive dolichocephalic skulls have a narrow, low, and receding forehead, the region of the sagittal suture, and often the frontal suture, is somewhat projecting, which imparts to the vertex a boat-shaped form; the temporal squama is low, but elongated from behind forwards, so that it sometimes reaches the frontal bone by intruding between the parietal bone and the great wing of the sphenoid bone, as seen frequently in the Negro, and which also occurs in the Australian, the Mongol, and the old Peruvian. This connection of the temporal squama to the frontal bone is observed in the anthropoid apes, the chimpanzee and gorilla; more rarely in the ourang-outang, but is by no means absent,‡ as asserted by Cuvier and

* *Crania Germaniæ Merid.-Occid.* Freib., i b, 1865, p. 82.

† *Amtl. Bericht über die 40. Vers. deutscher Naturf. u. Aerzte zu Hannover im Sept. 1866*, p. 242.

‡ R. Owen. *On the Osteol. of the Chimp. and Orang.*, p. 357; and C. B. Brühl, *Zur Kenntniss des Orangkopfes und der Orangarten.* Wien, 1856, p. 11.

M. J. Weber. The condition of the temporal squama shows very plainly the share which the separate cranial bones have in the total form of the cranium, or rather how they determine it. If the cranium be high and spacious, the temporal squama reaches high up, and its upper margin is circular; if the cranium be flat, or long and narrow, then the squama is elongated from in front backwards, and its upper margin is almost straight. It is thus found in the anthropoid apes, the Negro and the Australian, in the Neander-skull, and in the strongly dolichocephalic skulls of the old Germanic graves. That the orang possesses more rarely than the other large apes a temporal squama reaching the frontal bone, arises no doubt from the more brachycephalic form of his skull. On comparing with the human skull that of a mammal—of a dog, for instance—it is observed that the bones of the cranium take an unequal share in the diminution of the cranial capacity. The frontal bone is comparatively little altered in length; its upper point intrudes in many mammals even between the parietal bones, but it is flat and narrow. Perceptibly shortened is the sagittal suture of the parietal bones, but the latter remain the most curved and largest bones of the cranium. The temporal squama is low, and its upper margin runs straight. The occipital squama, which is showed in the shape of a narrow osseous ridge between the parietal bones, is most shortened. The skull of the great apes shows almost the same deviations from that of the human form.

The characters observed in the skulls of the lower races, namely, a narrow and low frontal bone, a short sagittal suture, a low temporal squama, a short occipital squama, the upper margin of which forms a flat arch, are therefore to be considered as approximations to the animal form, and they stand to each other in organic connection. If the occipital squama projects like a ball, a peculiarity frequently seen in Celtic and old Germanic skulls, it is also a mark of arrested development, and, like the great projection of the parietal protuberances, is a stoppage at the infantile form. Welcker* has shown that during the growth of the skull, the bones flatten and thus increase the cranial capacity, and he ascribes justly the arching of the bones to the pressure of the growing brain. We not rarely find in skulls of a rude form that the sides of the cranium under the parietal protuberances down to the temporal region form almost an even plain; this also is an infantile form, to which Meckel already drew attention by observing that in the infantile skull from the projecting ossification points, the upper and the lower portions of the bones almost form a right angle. We rarely find in crania of a rude form the parietal protuberances

* *Untersuchungen ueber Wachsthum und Bau des Menschl.-Schädels.* Leipzig, 1862.

obliterated, they are in most cases projecting as in the new born and in the female skull, the latter preserving also in other respects infantile characters. In such cases the greatest cranial breadth lies between the parietal protuberances; thus it is with the crania of Australians and other rude skulls of primitive times, *e.g.* the Engis skull, hence a large interparietal breadth is no proof of a good cerebral development, it is, on the contrary, a mark of arrested development. The Malay-skull with its rounded form has its greatest breadth between the parietal protuberances, but becomes narrower at the base, and is by this, as well as other characters, recognised as a rude form of the brachycephalic type. Already in the year 1828 Mayert† wrote that the Malay-skull resembles in form the type of the Orang skulls. At a later period, he describes‡ in the skull of a Malay woman a sinus pterygoideus and a sinus jugalis, as a species of animal form, and he also designates the peculiar depression of the nose and the stunted nasal bones, as seen in the low Malay skulls, as well as the projections of the jaws as similar characters. He once found in a Malay-skull of Nukahiva, the nasal bones completely absent; in a second skull the stunted nasal bones were so intergrown with the upper jaw, that they seemed to be absent. He also remarks that this stunting of the nasal bones as well as the high and broad occiput, are not usually seen in the negro. Stunted nasal bones occur also occasionally in the Negro. Leuckart‡ describes two such Negro skulls of Blumenbach's collection. Among the Hottentots we find equally that the nasal bones frequently coalesce in a little squama. Leuckart mentions, however, that the form of the nasal bones of a Japanese skull resembled that of the orang outang; this applies also to a Kaffir skull of Vrolik's collection in Amsterdam. Soemmering§ also found that a Marquesa skull of the island of Nukahiva resembled much that of an ape.

It may be easily conceived that if, in addition to the usual form of the Malay skull, there is a morbid arrest of cerebral activity, it must give rise to a human cranial form which strikingly betrays the animal type. This is the case with the skull of a Malay female idiot which was shown to me in 1867 by Halbertsma, of Leyden, and which he subsequently described.|| But in this case the cranial capacity was not greatly limited; it was not such an arrest of cerebral development as seen in microcephali. Halbertsma found in eight female

* V. Meckel. *Neues Archiv für Physiologie*, 1828, p. 437.

† *Organ für die gesammte Heilkunde*. Bonn, i, 1841, p. 114.

‡ D'Alton und Burmeister. *Zeitung für Zoologie u. s. w.*, i, 1848, p. 57.

§ *Catalog. Mus. Anat. qu. Coll. S. Th. Soemmering*. Francof., 1830; and *Neue Denkschrift der Societät zu Erlangen*, i, 2.

|| Halbertsma. *Beschrijving van een Oost-Indischen Idiotenschedel*, *Nederl. Tijdschr. v. Geneesk.* Jaarg, 1864.

Malay skulls the mean capacity to be 1306. c. cm., that of the idiot amounted to 1265, whilst that of the orang was only 340 c. cm. But the imperfect development showed itself in the narrowness and length of the cranium, in the strong prognathism, in the size of the facial portion, in the elliptic dental arch of the upper jaw, the short occipital squama, the high-reaching attachment surface of the temporal muscle, and the but slightly curved sutures. Halbertsma concludes his description with the remark, that this skull shows how much the human form may lapse into the animal type, and that this derivation is not expressed in a single part but in the whole structure of the skull. The peculiarities which this skull possesses in excess, occur commonly in a less degree in other Malay-skulls, proving that there is also a lower form of the brachycephalic skull. The general outline of both is different; they are apparently sprung from a different root, but both express an arrested development or a low organisation. On taking this view of the Malay-skull, it appears improper to look upon it as a mixed and not as a racial form. The Malay has more claim to the denomination of race than the American or Caucasian. Setting aside the changes the human skull undergoes by culture, there remain two rude types—the dolichocephalic and the brachycephalic skull. We possess no facts for their common origin; but that they are of different descent may be deduced from the circumstance that those regions of the globe in which the above types are strongly represented, namely, equatorial Africa and South Asia, are also the homes of two species of anthropoid apes, who differ similarly in cranial structure.

Even when from this fact no conclusion is drawn as to the origin of man, the analogy of the formation still holds good, and some may attempt to explain it by climatic causes. Duvernoy was the first who opposed the dolichocephalic Chimpanzee to the brachycephalic Orang. Agassiz has pointed out that in Asia and Africa the large apes and the human races have the same colour of the skin. I myself have drawn attention to the fact* that the gorilla is also dolichocephalic, and that the approximation of two human races to the apes of the same countries in colour and cranial form appears the most formidable objection to the unity of the human species in the present state of our knowledge. The casts of ape and race skulls, i.e., the cerebral forms shew that typical conformity more distinctly than the skulls themselves, whose projecting crests and frontal ridges in the apes do not clearly delineate the outlines of the cranium. In conformity with these remarks, M. L. Bischoff† calls the orang-outang

* *Verhandlungen des Naturhist. Vereins.* Bonn, 1864.

† *Ueber die Verschiedenheit in der Schädelbildung des Gorilla, Chimpanse und Orang-Outang.* München, 1867, p. 71.

brachycephalic, the gorilla and chimpanzee dolichocephalic and adds that these differences shew themselves already in very young animals. Virey even pointed out a psychical resemblance of the Negro to the wild African ape, and of the Asiatic to the gentle and docile orang outang. But there is no doubt the chimpanzee is also docile and gentle. If by races we understand, as was the original meaning of the term, roots of human stocks, there remain, of the hitherto distinguished racial forms, of which Buffon adopted six, Blumenbach by the fusion of the Lapps and Tatars, five; Rudolphi, by giving up the Malay race, four, and Cuvier, by the rejection of the American, three; there remain only two well-founded races, an Asiatic and an African, and the future will decide whether really the oldest European stocks, differing in cranial structure, have immigrated from Asia or Africa. The Austral negro, whose existence seems to militate against such a view, betrays by the height of his skull and his projecting parietal protuberances, an affinity to the Malay. It may also here be mentioned, that the oldest human civilisation had two regions of issue, India and Egypt, and that historical research has left the privilege of their respective antiquity undecided. Even the sharp-sighted Blumenbach* already maintained that all cranial forms may be arranged between the two extremes, namely, the Ethiopian and the Mongolic form.

Stature and muscular force have some influence on dolichocephaly or brachycephaly, and it is worth examining how far it extends by the side of hereditary differences. The dolichocephalic skulls of the present Scandinavians, Germans, and Celts of the past we find combined with high stature.† The little, round, brachycephalic crania of remote northern antiquity, described by Nilsson and Eschricht, designate, like the human remains of the reindeer period found in Western and Southern Europe, a short race. Malays and Mongols are usually of shorter stature than North-Europeans and Negroes. Welcker found that short men incline more to brachycephaly, tall men to dolichocephaly. Thus we find also the gorilla superior in height and strength to the orang-outang. There is no doubt that the muscles, as shown by the researches of Fick, exercise a hitherto unnoticed influence on the form of the bones in general and upon some cranial bones. The strongest of these muscles, the temporal muscles, which compress the cranium on both sides the muscles of the neck, which act on the occipital as well as the frontal and corrugator muscles, which project the soft parts of the frontal region; all these act upon the elongation of the cranium.

* *Decas v. Coll. suæ Cranior. div. gent. ill.* Goetting., 1808.

† Compare Schaaffhausen, *Ueber Germanische Grabstätten am Rhein, in den Jahrb. de Vercins v. Altherrthumaf.*, xliv, 1868, p. 109.

We find that when muscular force predominates in whole tribes, it is generally concomitant with a lesser degree of mental development; we thus find that the influence, which favours the increase of the skull in breadth is wanting. To assume that there is in the bones themselves a formative principle, we have no ground whatever. There exist startling examples of the influence of the muscles and the soft parts upon the shape of the bones. Blumenbach describes a skull, the facial bones were quite contracted by long continued spasms on one side. Another remarkable case is cited by Busch,* in which, in consequence of the contraction of the cicatrix after a severe burn, the bones of the left side of the face had become atrophied; the left half of the tongue also diminished in size. That the tongue corresponds to the space of the jaws is shown by the large tongue of the lower prognathous races. Virchow remarks that the position of the upper jaw is also determined by the tongue, he refers to the cretins and to a case of macroglossy.† Zillner‡ also shows that in cretinism the projection of the teeth is caused by the pressure of the tongue. The view of Retzius that dolichocephaly is produced by a great development of the occipital lobes, which is a privilege of human structure, and therefore represents a higher human form, is opposed to the occurrence of this cranial type, nor does it comport with the law of the development of the human brain. It is not the length of the occipital lobes, but their increasing breadth and height, which chiefly condition their stronger development in man. The old opinion that in man only, but not in the ape, the posterior lobes of the cerebrum cover the cerebellum has been proved to be erroneous.§

The following remark of Welcker: "As the ruder tribes of the Bashkirs and Calmucks are held to be the prototypes of brachycephaly, and as the narrow shape is considered to be the nobler form, so that every one speaks of the dolichocephaly of the Germans, it seems an affair of honour to save the dolichocephaly of the German skull," refers merely to a general prejudice, which the researches of Welcker himself have greatly removed. Aeby|| arrived by his measurements at the conclusion that the most important character of the skull is not its length but its breadth; and he divides, therefore, the crania into stenocephali from 130-148, and eurycephali from 159-168 mm. in breadth.

* *Sitzungsberichte der Niederrh. Gesellsch. in d. Verhand. des Naturhist. Ver.* Bonn, 1865.

† Virchow, *Archiv*, vii, p. 133.

‡ *Ueber Idiotie*, Jena, 1860, p. 197.

§ *Bericht über die Zusammenkunft einiger Anthropologen in Goettingen.* Leipzig, 1861, p. 33.

|| *Die Schaedelformen des Menschen und der Aften.* Leipzig, 1867.

The sutures constitute an important character for the determination of the development of the skull. They are straighter, almost lineal, in the new-born, and but little dentated during early infancy. In many crania of savages we find them in the same condition as they exist in infants from two to six years old. Even the usually long dentations of the lambdoid suture are short. It is, therefore, not surprising that we find the same low form in the prehistoric man. The cranium of the Neandervally betrays also in this respect its high antiquity and primitive form.

The ramification of the dentations indicates a slower and longer growth of the cranium and the brain, and corresponds with a higher mental development. It may also arise from the arrest of osseous development; for instance, from the deficiency of bone-forming lime, as is frequently seen in rickety heads and the soft skulls of the Mongol race, in which the spongy substance predominates. In such cases intercalated bones are often met with in the sutures. Lucae* found the quantity of ashes of a skull with distinct dentated sutures to be less than that of a skull with obliterated sutures. In all crania the quantity of ash of the external table is larger than that of the spongy substance. Virchow† asserted that in rapid growth of the bones the sutures become dentated and Wormian bones arise; but this view is in contradiction with all other observations, and if in rickety subjects the sutures remain rectilinear, it is not the consequence of a slow but of an obstructed growth of the bones. Although Lucae does not agree with Virchow that the Wormian bones diminish the cranial capacity, he agrees with him in so far that the dentated sutures indicate a rapid growth of the margins of the sutures, whilst they should be considered only as the consequence of the progressive growth of the margins with a diminished ossification. The continuous pressure of the growing brain must, in many cases, be the cause of the sutures remaining open. Their early closure may be due either to an early cerebral development, or may be the result of an inflammatory process, in which case cerebral development is obstructed. We cannot, therefore, admit as a general rule the assertion of Serres that premature closure of the sutures obstructs mental development; for this early closure is frequently only the consequence of a deficient cerebral development. In rachitis, the softening of the bones, which produces curvatures, is usually followed by a thickening of the osseous tissues, and an inflammation of the periosteum seems to attend both processes. Stahl* found that straight finely-indented sutures are con-

* *Zur Architektur des Menschenschädels.* Frankf., 1857.

† *Gesammelte Abhandlungen.* Frank., 1856.

‡ *Klinische Studien.* *All. Zeitschr. f. Psychiatrie*, 1854.

comitant with little cranial capacity, and that sutures with bevelled margins and dentated processes are conjoined with a larger cranial capacity. Compared with animals, man has the slowest ossification of the cranium and the greatest dentated sutures. The straight linear sutures are so much a mark of a senile synostosis, that some cranial sutures, like the frontal and sagittal, close first at those spots where they run straight. Welcker points out that the frontal suture closes first at the poorly dentated spot between the frontal eminence, which also applies to the suture between the occiput and the mastoid process. The depression of the posterior third of the sagittal suture, where it runs straightest, shows clearly an early closure at that spot. Lucae, therefore, justly supposes that senile obliteration commences first at the inner surface of the cranium, because the borders of the bones are joined there in a straight direction. From what has been stated, we arrive at the conclusion that early ossification and straight running sutures in healthy skulls are marks of inferior development. It did not escape the attention of Welcker that in animals and savages the sutures close early. Gratiolet* says also that the cranial sutures are more slowly closing in civilised peoples; but when he adds that their remaining longer open is the cause of their larger brain, we hold that the reverse is the case. He also points out that the closure of the sutures in the negro and the idiot commences in front, but in civilised peoples at the back. This observation is only half true. The early closure of the frontal suture indicates in most crania that the breadth growth of the forebrain by the elevation of the frontal bones, and the yielding of the coronal sutures, is sufficiently secured. The firm connection of the frontal bones to the root of the nose is probably the cause of the early closure of their suture.

The long continued breadth growth of the skull in its posterior and inferior parts, which may be observed in the heads of gifted men, necessarily conditions a later closure of the corresponding sutures. An early closure of the sutures at the occiput is only seen at the posterior part of the sagittal suture, and this may be connected with the slight increase of the subjacent cerebral convolutions. Welcker asserts that in an infant nine months old and in the adult the distance of the frontal eminences is the same, about 58 mm. in the average, which is doubted by Virchow and Lucae. Soemmering who had a Negro skull with a frontal suture, and latterly Humphry asserted that the frontal suture occurs both in broad and narrow foreheads. Welcker has, however, shown that it is found more frequently in brachycephalic peoples than in dolichocephalic, which might have been anticipated. In the burial place of Uelde of the stone period of

* *Comptes rendus*, 26 Août, 1856; and *Bullet. de la Soc. d'Anthrop.*, 1860.

Westphalia were found many crania with frontal sutures, which may be explained by the brachycephalic type and the predominance of the diploë. Engel* connects the open frontal suture with softness of the bone, hence in crania with a frontal suture all the sutures are frequently found open, as also pointed out by Welcker. That the short or long cranial form is connected with the early closure of the transverse or longitudinal sutures, and that the obliquity of the skull is in many, not in all, cases produced by the closure of a suture on one side only, are well known craniological facts. There are also numerous facts showing that in savage peoples the sutures are more simple. In the skull of a Negro, brought by Prince Max von Wied from Brazil, all the sutures are still open and strikingly simple; even the lambdoid suture is but little serpentine in its course.

The same condition presented a Peruvian skull, not artificially compressed, which Bibra brought from Algoa-Bay, also the cranium of Nieder-Ingelheim from a grave of the stone age, the Neander skull and partly also the Engis skull. Very simple, straight sutures are also seen in an Esquimaux, a Papua skull, and the old Batavia skull of Blumenbach's collection in Goettingen. The skulls of the New Caledonian, brought home by Bourgairel, now in the collection of the Garden of Plants of Paris; most of the African skulls† brought by Bilharz from Cairo, as well as the Negro skulls described by Barkow.‡ It were desirable that in future delineations of crania the sutures should be carefully attended to, which has hitherto been neglected and left to the fancy of the drawer. Broca has arranged that in the catalogue of the collection of the crania of the Paris Anthropological Society the development of the sutures should be mentioned. That the early closure of the sutures coincides with an inferior organisation is supported by many facts. Engel already pointed out that the idiot skull frequently showed premature synostosis of all the sutures. How much the formation of the bones differs in idiots is shown by the cretin skull cited by Hyrtl,§ in which there were 323 suture bones. According to Hyrtl, the suture bones arise when the ossification at the border does not proceed *pari passu* with the growth of the bone, and when the intermediate substance becomes ossified later, as is the case in hydrocephalus. Prichard remarked that in many Negro skulls all the sutures close early. Pruner-Bey|| also mentions this fact. J. Wallace found in four Negro skulls of a tribe of the west coast of Africa, who stand low in mental development, that the sagittal suture

* *Untersuchungen ueber Schaedelformen.* Prag., 1851.

† A. Ecker. *Schaedel Nordostafrikan. Völker.* Frankfort, 1866.

‡ *Comparative Morphologie*, 3 Bd. Breslau, 1865.

§ *Handbuch der Topogr. Anatomie.* Wien, 1853, p. 10.

|| *Mémoires de la Soc. d'Anthrop.* Paris, 1861.

left no trace. I saw in the possession of Van Beneden, of Louvain, in 1866, a small, oval, very thick, brown coloured skull from the peat of Blasfeld, near Antwerpen, in which the sutures were externally ossified, but internally quite obliterated; the straight but narrow forehead showed prominence in the direction of the frontal suture, of which a few dentations were still visible in the upper half; the whole sagittal suture was projecting, the vertex was roof-shaped, the plane of the temporal muscle was, in the whole, raised a few millimetres above the cranial surface. In this case there must have been a strong muscular pressure upon the skull. That this pressure is one of the causes of the early coalescence of the sutures may be proved by the fact that an artificial pressure upon the skull will produce the same effect. D'Orbigny says that the Aymará skulls presented closed sutures at all the spots which had been compressed; even the skulls of young persons showed this condition. Welcker found in a Huanca skull a portion of the coronal suture obliterated. Such is also the case with the macrocephalic skull brought by Prince E. Wittgenstein from the Crimea, which is now at Wiesbaden. On the other hand, in the compressed skulls from a grave near Niederolm, described by Ecker,* all the sutures are open, but little dentated. The heart-shaped Mexican skulls of the Paris Museum are in the same condition. The early-closing animal skull is more covered by muscles than the human skull. Finally, it is not surprising that the skulls of the fossil dog or wolf, as I have observed in the cave bones of Westphalia, have straighter sutures than the domestic dog.

The most palpable mark of an inferior organisation is the projection of the jaws and the teeth, which is the rule in many savage races, and is usually coincident with arrested cerebral development. It occurs in all races, but only exceptionally in the Caucasian. Camper's facial angle shows this condition. Blumenbach found it in the square head of a Sarmatian and in the narrow skull of a Congo negro. In the highest degree of prognathism the teeth are in the direction of the jaw. In the Malay, the anterior surface of the upper jaw under the nasal aperture is often distinctly concave, and the teeth of the upper jaw then project above those of the lower; in the Negro the above surface is convex.

Pruner-Bey calls double prognathism that rare occurrence, when the incisors of the lower jaw are also projected forwards, and thus form with those of the upper jaw an acute angle. Cranial fragments from the stone age show marks indicative of a prognathism which exceeds that of living savages. It is unquestionable that in the apes prognathism increases with the growth of the skull, and this is pro-

* *Archiv für Anthropologie*, i. Braunschweig, 1866.

bably the case with the lower races. Pruner-Bey found it slight in an infantile Negro-skull. I found the same in a Negro-skull of the first dentition in the Paris collection. It is, therefore, important to notice that in several infantile skulls of remote antiquity a very considerable prognathism has been observed. Pruner* first drew attention to this; that it was the skull of an idiot cannot be urged. I found the same conformation in some fragments of infantile skulls found at Uelde. It also struck me that we so frequently find in ancient female skulls so decided a prognathism that they almost resemble the Ethiopian skulls, and have been mistaken for it. The most prognathous skull in the cave of Frontal† is that of a female. This may be simply explained from the fact that the female skull retains in its growth more signs of imperfect development than the male, namely, the projection of the parietal protuberances, the lesser elevation of the frontal bone, the shorter and narrower cranial base, and with the latter is connected the more elliptical dental arch and the inclination to prognathism. When the characters of a race type were not viewed as a whole, and when the degree of the development of a skull was not yet distinguished from its type, then striking individual features were held as determining the racial form, and it was believed that these features occurred also in other races, although only exceptionally. Thus prognathism in a European skull was said to be an Ethiopian character. Blumenbach already said that the Negro is distinguished from the European as is the wild boar from the domestic swine. M. J. Weber‡ tried to show the occurrence of all race forms in the skulls of the inhabitants of the Rhenish provinces; but it is only because individual cranial bones may in all races present similar conditions of development, that such similarities of individual character which never represent a whole race type may occur. Among the negroid skulls which Weber found in the collection at Bonn, three are female skulls.

In the skull of a Jewish girl, delineated Tab. xvi of a work cited below, the forehead is wider, the sutures more dentated, the zygomatic bones less projecting than in the Negro, and the nose is, by a crista, separated from the surface of the upper jaw. In a female skull of the anatomical collection of Goettingen, the negroid type is limited to the projecting jaw; the round cranial form, the broad forehead with distinct frontal eminences, the broad wing of the sphenoid, the finely indented sutures, do not by any means correspond with the Ethiopian

* *Anthrop. Rev.*, London, No. 16, p. 126.

† Van Beneden and Dupont. *Bullet. de l'Acad. Roy. de Belge*, xix, No. 1.

‡ *Die Lehre von den Ur- und Rassenformen der Schädels und Beckens des Menschen*. Düsseldorf, 1830.

cranial form. Vrolik* also cites the skull of a girl nineteen years old which, by its prognathism, length of palate, and receding forehead, resembles that of a young negress; but whilst the form of the jaws reminds us of the orang, the nasal bones present a sharp ridge, and the sides of the cranium are arched. The lower jaw of La Naulette presents a decided animal prognathism, as the chin, so prominent a feature of human expression, is wanting. The jaw here takes part in the prognathism, and forms behind the incisors an obliquely directed surface. This striking simian form had, until then, not been observed. The fossil jaw of Arcy possesses it in a less degree; I also find it in the fragment of an old lower jaw of Fritzlär,† in the jaw of a young person found at Uelde, in which the canine tooth projects above the first molar nearly four mm., and in the lower jaw of Grevenbruck,‡ which also, in the elliptical form of the dental arch, betrays a low organisation. The jaw of La Naulette possesses another animal character, namely, the size of the molars; the last of which is the largest, with five roots, as in the anthropoid apes, with exception of the chimpanzee. Owen§ has pointed out that in the Caucasian race the two external roots of the last molar were usually grown together, and that sometimes the internal is united with them; which is never the case with the Melasian races. In Australians the wisdom tooth has always three distinct roots, as in the chimpanzee and the orang. In civilised races the posterior dental portion of the jaw is always shortened; that this is not the case in savage races, is shown by the fact that we find in them occasionally six instead of five molars. Soemmering found the latter five times in Ethiopian skulls; and we find also in the orang sometimes a supernumerary molar. It is frequently observed in the Negro, the Australian, and the Malay, that the true Molars are equal in size. The narrower base of the primitive skull, and the projection of its jaws, cause the dental arch to be more elliptical, whilst in the higher-formed human skull it is paraboloid. Among savages we find that the lower Negroes, the Australians, and especially the Malays, present this elongated form of the dental arch, so that the molars stand almost in straight lines and parallel to each other. In the collections of Utrecht and Leyden, so rich in Malay skulls, I noticed this form. The resemblance to the ape jaw becomes still greater when the dental arch is nearly rectangular, and when also the incisors form a straight line. I have thus seen it in Negroes

* *Musée Vrolik, Catalogue, etc.* Amsterdam, 1865, p. 64.

† E. Müller. *Ueber einige Menschliche Ueberreste aus der Steinperiode.* Marburg, 1864.

‡ *Sitzungsber d. Niederrhein. Gesell in den Verh d. Naturhis. ver.* Bonn, 1864, p. 30.

§ *Odontography.* London, 1840-50.

and Australians ; also in the lower jaw of a skull from Madura, in the Goettingen collection. In the child, as Welcker has shown, the distance of the last molars on both sides is less than at a later period, although the length of the dental arch does not increase after the second dentation. The fossil lower jaw of Grevenbrück possesses this character, and other signs of primitive form, in which it resembles that of a child, namely, the scant height of the horizontal portion, and the short articular process, forming an obtuse angle. Owen declares it a peculiarity of man that the pre-molars of the upper jaw have never three different fangs, as is the case with apes. Such a form had hitherto never been observed in lower races. I am the first who found this character pertaining to the remote antiquity of our species, in a skull of the bronze period* found at Olmütz ; the second pre-molar of the upper jaw has here three very distinct roots. I found the same in two skulls of the common shape in the anatomical collection of Goettingen ; in No. 1297, the first upper left premolar, and in No. 1354, the same tooth on the right, have three roots. Premolars with two separated fangs are not rarely met with in the lower races. The interval also (*diastema*) between the canine and the incisor, so well marked in the apes, is also met with even in man. A Kaffir skull in the collection of Erlangen, delineated by R. Wagner,† shows this plainly.

The nasal bones of the primitive skull we must assume to be small, as we find them so in the lowest races. In the latter, the floor of the nasal cavity passes, with a smooth plane, into the anterior wall of the upper jaw. The same form presents an old Germanic skull from Nieder-Ingelheim, and a skull from the so-called giant grave, which Dr. Wentzel, of Bergen, kindly presented me with.

That the rude skulls of antiquity show the effect of strong muscular action is easily conceived, when we consider that the first inhabitants of Europe had to sustain a great struggle with the animal world. Deep zygomatic fossæ, strongly projecting superciliary ridges, a high and projecting temporal line, a greatly developed occipital spine, are more or less combined. In a skull found near Lippstadt,‡ of the stone period, the semicircular line of the occiput runs in the shape of a sharp osseous ridge from one mastoid process to the other. Eschricht§ delineated a skull from a Danish barrow in the island Fyör, which has on the occiput a projecting osseous spine ; the temporal squama reaches the frontal bone. I, myself, possess a Germanic

* *Sitzungsber. d. Niederrh. Gesellsch. Verh. d. Naturhist. ver.* Bonn, 1865.

† *Icones, Zootom.* Leipz., 1841, Tab. II, fig. xv.

‡ *Sitzungsber. d. Niederrhein. Gesell. in Verh. d. Naturhist. ver.* Bonn, 1859, p. 103.

§ *Amtl. Bericht der 22 Vers. deutsch. Naturf. u. Aertze in Bremen, 1844, p. 92.*

skull of the rudest shape, found in Cologne, which is very long, narrow, thick, and prognathous; the temporal squama reaches the frontal bone, the sutures are simple, the temporal line strongly developed, a superior premolar has two divergent fangs, the occipital lines coalesce in the centre in a strongly projecting squama. A strong occipital crest is frequently accompanied with a weakly developed mastoid process, which is nearly wanting in the ape. If the skull is well fixed to the neck, it is less moveable on the vertebral column; the powerful mastoid processes of the human skull are, therefore, the result of the erect posture, with which many peculiarities of the human form are connected. The occipital foramen lying further back, the simple convex curve of the vertebral column, the walk with a projecting body of the Negro and other savage races, prove that the more noble human form is quite erect, by which a more free rotation of the head upon the vertebral column is acquired. Ecker has justly enumerated among the characters of the male skull, the large and strong mastoid processes, which correspond with the greater muscular force of the male. When B. Davis* cites, against this view, the small and little prominent mastoid processes of an Akassa Negro of the west coast of Africa, it may be explained by a strong posterior attachment of the skull to the vertebral column. I have several times seen small mastoid processes in rudely-shaped ancient skulls.

In this way we may, by the combination of individual fragments, found in Western Europe, obtain an idea of the primitive human skull. That the primitive man had a similar form in other regions, may be inferred from the fact that the lower races in different countries possess corresponding marks of a low organisation. But such a great resemblance of the oldest fossil skulls, affording a proof of a common origin, has hitherto not been found in our part of the world. There remains, as for the living races, two forms which cannot be united, namely, a brachycephalic, which is now mostly predominant among the peoples of Northern and Southern Asia, and a dolichocephalic type, prevalent in Europe and Africa.

It is not surprising that in the region intermediate between Europe and Asia, namely Russia, both types should prevail. According to the researches of Dr. Copernicki, of Bucharest, the great Russian in the north-east of the empire is dolichocephalic, inclining to a roof-shaped vertex, he is of high stature, fair or red haired. The little Russian, or Ruthene, is short and brachycephalic, his hair is chestnut, and he speaks a different dialect. Despite this difference in the fundamental form, the law of the development of the human skull is universally valid. The skull of savages possesses characters which are the same

* *Archiv für Anthropologie*, II. Braunschweig, 1867.

everywhere. There exists an unquestionable similarity of form between the skull of the old Briton and that of the present Australian. A scant breadth of the base of the skull is, in the Negro and the Malay as in the pre-historic man of Europe, the mark of an imperfect cerebral development; the features, which resemble each other in all low races, are such as correspond with a scant development of the mental powers, the improvement of which has in all countries the same influence upon the improvement of the cranial form. There are two influences forming the characters of human races—climate and civilisation; upon climate depend stature, general physical conformation, colour of skin and hair; but it is civilisation which develops the brain, gives height and breadth to the skull, and diminishes the frame of the jaws. Indirectly civilisation acts upon all race characters, because it can limit and change the influences of the climate. On the other hand, climate often facilitates or impedes civilisation. It may further be asserted that whilst a manifoldness of type is caused by the difference of climatic conditions, mental culture may be a means for the approximation and equalisation of forms. It is not surprising that we find the extreme forms among savage peoples, and that the past presents to us forms more widely differing than the present. It is unquestionable that the anthropoid apes of Africa and Asia, which live under similar climatic influences, do not differ from each other in cranial form as much as human races of different parts of the globe. Their wider geographical distribution exposes them to greater changes of natural influences, and the different degrees of their civilisation produce other divergencies. But there exists a decided dolichocephalic and brachycephalic type in the cerebral form of these apes. I find the cast of the cranium of a chimpanzee one hundred and nineteen mm. long, and ninety-two in width, that of the orang one hundred and nine mm. long and ninety in width, that of a young orang one hundred and five mm. long and ninety-four wide. The differences are greater in adult animals, and are greater in length than in breadth. The type of the Negro and that of the Mongol are already recognisable in early infancy, as already observed by Blumenbach.* We cannot agree with Pruner-Bey and Acby that race differences are not observed in the infantile skull, they only become more prominent at a later period. When we adhere to the designation of race skulls, as proposed by Retzius, namely, of the brachycephalic and dolichocephalic form, it must at least be allowed that the indication of the greatest length and the greatest breadth of a skull does not decisively characterise it. Two skulls may agree in these measures and yet differ in shape, descent, and the degree of their development. On the other hand,

* *Decas III, Coll., etc., No. 29 and 30.*

the length and breadth of a skull is a palpable mark of distinction, and herein consists its value. To this may be added that the widely differing cranial types, that of the Mongol and Negro, also differ in this respect, although the skull of the Negro can only be called long in proportion to its scant breadth. R. Owen* has pointed out that the dolichocephalic type of the African skull does not consist so much in its greater length as in its scant width and height, and that the length of the hemispheres is much more constant than their breadth and depth. Aeby, therefore does not distinguish skulls into long and short, but into narrow and broad. This denomination labours under the disadvantage that the greatest breadth of a skull occurs in different spots, and has therefore a different signification.

Every classification which relates to individual cranial measurements is defective, and the greatest confusion may arise if there be no agreement in the method of mensuration, as is unfortunately the case in measuring the breadth of crania. Sometimes the width is measured between the parietal eminences, sometimes over the auditory apertures or some other spot. The same skull may thus, when differently measured, be either dolichocephalic or brachycephalic, as is the case with a Malay skull of Macassar now in my possession. This skull is 169 mm. long, and measured over the auditory aperture 114 mm., but between the parietal eminences it is 131 mm. wide. As, according to Blumenbach, all different race types are connected by intermediate forms, it became necessary to adopt a medium measure between the long and the short skulls. Von Bär recommended a width amounting to 80 p.c., Welcker, 75 p.c. of the length. But when we speak of a dolichocephalic or brachycephalic type, we ought to attend not merely to the proportion of breadth to length, but to other characters usually combined with it. Halbertsma found in normal Malay female skulls, length 164 mm., breadth 135, cranial index 83. In the idiot cited above, the length is 173, breadth 130, cranial index 75, and that of an orang 74. Still the idiot has, despite her cranium being called long and narrow, not lost the Malay type. The high vertex, the high situated parietal eminences, the erect occipital squama are all preserved, and as the section of the cranium shows the cranial cavity is brachycephalic, the greater length is produced by a thickening of the cranial bones in the direction of the length diameter. The most minute measurements hitherto applied give no correct image of the skull, when we neglect the form and quality of every separate bone. Owing to the zeal of fixing the differences of cranial forms by systematic measurements, we have omitted to attend to the other characters, which may give us some clue to the degree of the develop-

* Du Chaillu. *A Journey to Ashango-land*. London, 1867, p. 439.

ment of the skull. Aeby says point blank, that the cranial form affords no certain means for a proper classification of races—but if the most important part of the body does not furnish us with a starting point for classification, then we ought to give up the attempt. But the want of success may perhaps be owing to a false method of investigation. Another error which underlies many views on cranial formation is this, that we search in nature for fixed types which do not exist in it. Even that form which we call dolichocephalic or brachycephalic, though probably of different origin, is not immutable. The form of a cranium is first determined by hereditary disposition, which may be altered by the influences of aliment, climate, muscular action, mental development, and intermixture with another type. Muscular pressure may have rendered the originally brachycephalic crania of the Esquimaux and Polynesians long and narrow, and the long and narrow skulls of pre-historic times may, by mental culture, have become broader in France, Germany, and elsewhere.

From what precedes, we may consider the axiom as established, that a skull which does not present the characters of a low organisation cannot be considered as belonging to the primitive man, although the skull may be found associated with the remains of extinct animals. It follows further, that we must place the primitive man lower in the scale than the rudest living savage. The Neander-skull and the La Naulette jaw present characters of a low organisation, such as we do not find in any living race. No doubt it is a great loss to science that we possess only a few fragments of the human organisation of the remotest periods. Our imagination must try, supported by the laws of organic formation, to collect the scattered parts of the primitive man, and to construct his frame; until the time arrives when a happy find may confirm our speculations and deductions relating to a question, which hitherto inaccessible to science, has become the most important of anthropological inquiries.

ON THE ORIGIN OF THE ANTHROPOLOGICAL REVIEW AND ITS CONNECTION WITH THE ANTHRO- POLOGICAL SOCIETY.

IN closing our sixth volume, we purpose to give a short history of the origin of the *Review*, and to address a few words to our readers on the subject of the connection which has existed between it and the Anthropological Society of London. We have hitherto been too much en-

grossed with subjects of scientific interest and importance to devote much space to our relations with the Anthropological Society of London, and too much concerned with the present to even glance at our origin and past history. Fourteen years ago, a Fellow of the present Anthropological Society of London became a student of the writings of Knox and Lawrence. Soon afterwards he became personally acquainted with the great modern British philosophical anatomist and physiologist, whose cruel history has yet to be written. It is necessary for us to go back to this period, because at that time were commenced the labours which finally produced this *Review*. At that date (1854), anthropology in England was at an extremely low ebb. Prichard was dead, Lawrence was silent, Knox was an outcast, Crawfurd took no part, and was not even a member of the only body which then existed in England for the cultivation of any portion of anthropological science. The Ethnological Society, which had been started ten years before, was in a dying condition. It only held seven meetings in the year, and these were but thinly attended. So scarce were original papers, that the meetings were not unfrequently eked out by the reading of extracts from books of travels. Whilst in a state of utter depression, the late lamented Mr. John Crawfurd, in the year 1858, became a Fellow of the Society, and was nominated as President on the same day. From this time may be dated the *renaissance* of the Ethnological Society. Both President and other officers worked energetically in its behalf, and their joint labours soon resulted in financial improvement and marked progress throughout. Prior to Mr. Crawfurd's occupying the presidential chair, his views on certain scientific subjects had been far from popular with a faction of Quakers, who, headed by Dr. Hodgkin, were then dominant in the Society; and neither friendly nor respectful were the terms in which Mr. Crawfurd and his opinions were spoken of. It may be mentioned also, as a further example of the state of scientific feeling thirteen years ago, that the late Dr. Robert Knox was, in the year 1855, proposed an ordinary Fellow of the Society, and black-balled! He was, however, elected in 1858 an Honorary Fellow, to the horror and indignation of the Quakers. It would be wrong to conclude this part of our subject without a passing notice of Sir James Clark, Bart., who was President of the Society before Mr. Crawfurd. We do not hesitate to assert that no president of any scientific society ever performed his duty more conscientiously than did this distinguished physician. The conflicting elements with which he had to deal, however, and the little interest evinced in ethnological questions, even within the Society itself at that time, gave him few opportunities of raising the standard of scientific opinion during his régime. At the anniversary meeting of 1858, this

utter indifference came to a culminating point—the meeting consisting of but six members, the President Sir James Clark, three officers, and two other members! Nor was even this extremely select gathering by any means unanimous in sentiment, a vote of thanks to the President and Council failing to find a seconder. It was the conviction that but little good could be achieved in arousing a spirit of inquiry into the most important scientific questions of the day without some organ specially devoted to the subject of the study of the races and science of man, that led to the organisation of our present periodical.

It was in the autumn of 1859 that a prospectus was first drawn up of a quarterly journal on these subjects, and was even put up in type—the proposed title being, “The Quarterly Journal of Ethnology.” Further preparations were also made for it by the translation of some of the foreign recent literature relating to the study of man, and both Dr. Knox and Mr. Crawford promised their active support and co-operation. Shortly after an application was made to Mr. Luke Burke, who, in 1848, edited the *Ethnological Journal*, to enter into the scheme. He was at the time, however, too much engrossed with other subjects to occupy himself with the proposed quarterly.

Other obstacles also intervened, and the plan remained in abeyance; the idea was, however, never abandoned, and many valuable works were translated and matter collected, with a view to quarterly publication when the time for it should arrive. In the year 1862 it was finally resolved to carry out this plan; but an Anthropological Society being started in England some few months later, and a quarterly journal of anthropological science forming a part of the programme of that Society, our present publication was issued conjointly with the Society's official journal. It must, however, be clearly explained that, although this connection exists between the Anthropological Society and our *Review*, the former has never been answerable for any expenses which have been incurred in bringing out the *Review*, beyond paying at a fixed rate per number for copies actually taken by the Society—whether few or many—and which payment, be it remembered, includes the printing, binding, and advertising the journal of the Society.

We shall not here enter upon the differences within the Ethnological Society, which partly gave rise to the foundation of the Anthropological Society, and at any rate hastened it. We may state, however, that one of the earliest matters of dispute was with respect to the admission of ladies to the meetings of the Society. And here we had, perhaps, better quote the words of the Founder of the Society, written in 1864. They appear in the dedication of Carl Vogt's *Lectures on Man* to Professor Broca, and run as follows:—

"Some seven years since, when I first had the honour of being introduced to you by our late lamented colleague, Dr. Robert Knox, I held, as you may remember, the office of Honorary Secretary to the Ethnological Society of London. Most heartily did I welcome the birth of your Society, on behalf of that of which I was then an officer, believing at that time the Société d'Anthropologie de Paris to be merely an Ethnological Society under another name. In watching the development of your Society, and tracing the vastness of its extent and objects, under the administration of yourself and your illustrious colleague, I soon perceived that pure ethnology merely formed a part of the grand science then inaugurated by you. With the most intense pleasure and admiration I witnessed the gradual establishment and progress of your Society, endeavouring, at the same time, with all my power to incite the Ethnological Society to similar efforts. This attempt, however (truth compels me to record), proved a signal failure—a circumstance which caused me disappointment at the moment, but which I now consider fortunate; for I soon became aware that anthropology and ethnology could never become synonymous terms, inasmuch as the latter merely constitutes a part of the comprehensive science of anthropology.

"I am glad to state that, at the present time, this profound distinction is fully admitted by unbiassed persons in England. My failure, however, in arousing the Ethnological Society from its torpor, was not attributable to this confusion of terms, the matter not having then received public attention in this country, but arose entirely from the opposite views held by myself and my colleagues as to the objects of the Ethnological Society, and its duties as a scientific body.

"The stand-point claimed for the science of ethnology by the late Dr. Knox, by Captain R. F. Burton, the present senior Vice-President of the London Anthropological Society, by myself, and by some others, was that of a grave, erudite, and purely scientific study, requiring the most free and serious discussion, especially on anatomical and physiological topics, for the elucidation of the many difficult problems arising out of the subjects brought forward. This, however, was far from being the opinion of a large and powerful section of the Society, headed by my venerable friend, Mr. John Crawfurd. The party under his leadership desired to place the Ethnological Society on a footing with the Royal Geographical Society, and to render its meetings fashionable and popular by the admission of ladies. You will, doubtless, smile at the strange idea of admitting females to a discussion of all ethnological subjects. However, the supporters of the "fair sex" won the day, and females have been regularly admitted to

the meetings of the Ethnological Society during the past three years.

"Even now the advocates of this measure do not admit their error, nor do they perceive how they are practically hindering the promotion of those scientific objects which they continue to claim for their Society. On the contrary, they rejoice at their victory, and Mr. Crawfurd has publicly, on more than one occasion, ascribed the success which attended the Ethnological Society under his régime to the admission of ladies.

"Apart from this fatal mistake, you will readily understand that other important, and indeed vital, differences existed as to the mode in which such a society should be conducted. Finding myself, therefore, unable to give my cordial support to a society whose apparent objects were so utterly at variance with my own views—views in which I was not without supporters—the idea occurred to me of establishing in this country a really scientific society, which, taking yours as a model, might become worthy of a great nation."

We have endeavoured to explain clearly to our readers that our present quarterly owes its origin, not so much to the formation of the Anthropological Society—it having been prepared to appear before the world had that Society never come into existence—as to the marked change in the public mind, which had become aroused to the importance of the study of man under all phases of his history. The change of title from that originally intended, namely, from "The Quarterly Journal of Ethnology" to "The Anthropological Review" (published quarterly), although no absolute change was made in the original plan and leading objects of the publication, allowed scope for a wider range of subjects than would have been admissible under the earlier designation.

It will thus be seen that this *Review* owes its origin to other causes than the existence of the Anthropological Society. By a happy accident, or by a well-conceived design, the two schemes have worked in harmony, and, we believe, have been mutually beneficial. Those who are competent judges on such a point, like Sir Roderick Murchison, we believe have expressed their opinion that the unexampled success of the Anthropological Society is due very largely to the existence of the *Anthropological Review*. When it was finally decided to publish the first number of this *Review*, a letter was addressed to the secretaries of the Ethnological and Anthropological Societies, offering to print their Journal or Proceedings at the end of the *Anthropological Review*. Identical terms were offered to both societies: one refused, and the other accepted. Here we cannot but think that the Ethnological Society made a very great mistake. Had

it accepted the terms offered, it might now be able fairly to encounter the society which accepted it. In this case a contemporary would not have lent its pages to the publication of ludicrous letters, containing false and calumnious charges against ourselves and the Anthropological Society. It is the very success of the Anthropological Society which has aroused so many enemies, not only amongst the masses of the people, but amongst a somewhat exclusive *coterie* who believe themselves to be the only scientific men of the day. We have long heard it hinted that the arrangement existing between the *Review* and the Society was novel in the history of scientific societies, and that it must not be allowed to exist! Such ideas are worthy of the men who uttered them. We have as much respect for the dignity of scientific societies as any-one; but we fail to see why it is necessary that they should all be modelled on the same plan; or, more especially, why such plan should be that which was originated two centuries ago.

Our original arrangement with the Anthropological Society was as follows. Our publisher undertook to print the official Journal of the Society at the end of each number of the *Anthropological Review*, on condition that the Society took a copy, at trade price, of the joint publication for each paying Fellow. In other words, instead of going to the expense of printing and binding their own Journal, they engaged to accept the offer, and thus to save themselves, at that time, at least, much unnecessary cost. Now, the *Review* and *Journal* are supplied to the Society for about 2s. 3d. per copy, and the printing and all other expenses connected with their Journal, is included in this amount.

It will probably be a matter of surprise to that majority of our readers who are unacquainted with the details of literary work, when they are informed of the actual cost of bringing out such a publication as ours; nor should we have alluded to a topic which both custom and good taste usually keep in the background, had not a faction lately introduced the subject of the finances of the Anthropological Society to the public in a spirit neither friendly to ourselves, nor tending either to promote the cause of science, or serve the Society, on whose behalf, but without whose sanction, they appear to have been made. So little was known, during the earliest years of our publication, of the aim and objects of anthropological science, and of the existence of a society for its promotion, that considerable sums of money were expended in advertising our *Review* and the Journal of the Society, which resulted in a number of persons becoming subscribers during the first year. These subscribers, learning through our pages the particulars of the Anthropological Society, almost universally joined the Society the following year, instead of remaining independent subscribers. The same thing has continued up to the present time, our external circulation remain-

ing almost in *statu quo*. Several hundred pounds have been expended on the *Review*, and it was thought, by competent judges, likely to become a good property ; or, at least, that it might be worked so as to repay the money expended to establish it. An application was made during the year 1864, to reduce the price of the *Review* to the Society ; but an investigation of our finances showed our liabilities to be too great at that time to accede to the request of the Council. In 1865, further efforts were made, at a considerable expense in advertisements, to extend the sale of the *Review*, and, at the same time, promote the prosperity of the Society. With this object a number of copies were distributed gratis. A similar policy was pursued during 1866. We freely acknowledge that these efforts were not successful so far as the finances of the *Review* were concerned, but we have the satisfaction of knowing that benefit did accrue both to the Society and to anthropological science.

We were perhaps too sanguine as to the interest of the public generally in questions so deeply interesting to ourselves. Our *Review* was, we admit, in 1865 and 1866, financially a failure. Numbers of unsold copies of these years may now be had at a merely nominal price ; and a gift has been made to the Society of a quantity of back numbers for the benefit of future members. The end of the year 1866 brought the commencement of the great financial panic. It is curious to watch the effect of financial prosperity, or its reverse, on the progress of science ; and our publication, in common with nearly all others of a scientific character, suffered from the depression of trade in 1866, and which has, indeed, continued more or less up to the present time. We decided, therefore, in 1867, to print fewer copies of the *Review*, and also to economise our expenditure as far as possible. Since that period our independent circulation continues steady and, on the whole, satisfactory.

It is not for us to speak of our own labours during our six years of editorship. Our work has been a labour of love ; but that it has been an arduous one, those who have attempted a similar undertaking will readily credit. Nor need we assert here our zeal for the cause of scientific progress, and our warm interest in the prosperity of every scientific body which strives to do honest scientific work.

Some remarks have been made against the anomaly of an independent *Review* being supplied to the Fellows of the Society. This is a question which we hope the Fellows of the Society will fully and freely discuss. We believe that an *Anthropological Review* is a necessity of the time. That it has helped to establish the Anthropological Society we feel equally sure. We do not pretend, however, that the present arrangement is the best which can be found. The subject of the pre-

sent and future connection of the *Review* and the Society has ever been one of great anxiety to the originator of this *Review*. We believe that it is to the interest of all parties, and to the advantage of science, that this subject should be fully discussed and finally settled. It is one of paramount, if not vital, importance to the Anthropological Society. • If the Society will undertake the management and control of this *Review* we shall be extremely glad. We cannot see the least reason why it should not do so. The Society would have to nominate an editor, and it could then exercise some amount of influence over its pages. At present they have no risk, and consequently no control. That at an earlier period it was judicious for the Society not to accept the copyright and management of our *Review*, we cannot doubt. Now, however, the matter is changed. The *Review* is at present worked by trustees, and the profits, should there ever be any, will be devoted to the foundation of a Medal in the Anthropological Society. The originator of the *Review* has reserved the power to manage the editorial department for life. If, however, the Anthropological Society will accept the copyright and publish the *Review*, it will be handed over to them unconditionally. All we say is, that an *Anthropological Review* is a want of the time; and we shall always be glad to do all we can to establish it on a solid and, if possible, a lasting footing. On surveying our past history in connection with this *Review*, we feel that we have been engaged in a good work. We defy any honest man to charge us with merely representing the views of a faction or a clique. On the contrary, it is known to every student of Man-science, that our pages have always been open to writers of every shade of opinion. We do not profess, nor has it ever been our desire, to show more favour to the doings of the Anthropological Society, than to any other learned body. Our object has been to act as a medium of communication between students of every branch of anthropological science. Nor are we aware that we have shown that very common defect amongst the generality of scientific men of the day, viz., of restricting the limits of the science of man. On the contrary, it has been our object to conduct this *Review* in a truly catholic spirit. At the risk of giving offence to a large class of our readers, we have opened our pages to theorists and speculators of every description. Our past and present will be an index of our future. We shall still continue to disregard the feelings and wishes of party, and do all we can to become the organ of genuine free science. All we ask of our contributors is, that they should write in a scientific spirit, and base their speculations and theories on either ascertained facts, or logical inferences.

With regard to the issue of the Journal of the Anthropological

Society at the end of this *Review*, that may disappear at any moment. The Fellows of the Society will consider their own interest and pleasure in this matter. Their decision will in no way affect the general principles on which this publication will be conducted in the future. The Anthropological Society of London has now become one of the recognised institutions of Europe ; and we have little fear that it will in any way be injuriously affected by any change that it may think it advisable to make in its organisation. All we hope is, that the Fellows of the Society will be guided in their decision solely by a desire to benefit the cause of science. We have little doubt that such will be the case ; but we feel it our duty to give here a warning. For a long time, we know, it has been the object of a small but influential band of scientific men in this country, to do all they can to ruin the *Anthropological Review*. That object has long been aimed at ; now it is openly avowed by some whose praise we should consider the highest censure, and whose denunciations we look upon as our well-earned recompense for our past labours. Some parties formerly directed their thundering denunciations at the Anthropological Society. In this they signally failed. The attacks on the Society have only made it take root more deeply and more firmly. Having, therefore, been foiled in their attempt at that time to injure the Society, they now intend to make war upon this *Review*. This does not at all alarm us. We know the strength of our enemy ; but we know more—we know their weakness. In the past we have been very chary in dealing with those who have attacked us. If such beings had a spark of gentlemanly feeling, we would argue with them ; as it is, we merely look upon them as curious objects of study, in whom one characteristic which belongs to all genuine scientific men is utterly absent. There are other antagonists, however, who are gentlemen. We shall always treat them as such. Honest competition and fair rivalry we consider both necessary and laudable. We are ready to take our part in a fair combat for the victory of anthropological science, without any support or encouragement of any sort from the Anthropological Society. On the contrary, we believe that some of our contributors occasionally feel hampered in the expression of their opinions by the connection which exists between the *Review* and the Society. We trust, that whatever may happen, they will no longer feel this. It has been suggested to us, that in this number we should hang out our future flag, whether the colour be white, red, or black. We must, however, decline to accede to such a suggestion. We feel too much contempt for those who attack us even to take the slightest notice of their ebullitions of spite and jealousy.

One of our oldest and most valued contributors, a short time since, sent us the following:—"There was a report that one of the indispensable conditions of amalgamation was the suppression of the *Anthropological Review*; a suicidal course, the meaning of which it is very difficult to divine."

Let us here say, once for all, that it is out of the power of any society, or any body of men, to "suppress the *Anthropological Review*." Such threats only show the silliness and weak-mindedness of those who make them.

The prospects of this *Review* were never better than they are now. Our labour as editor is daily becoming lighter, and our contributors more numerous. We are still anxious to acquire assistance from others; because it is most advisable to get all the variety of ideas and expressions which we can command. Our warmest thanks are due to the friends who have worked with us without fee or reward of any sort or kind.

In another place it will be seen that we have had for a moment to raise our visor, and to ask those who desire to attack the management of this *Review* to strike their blows direct at ourselves. We have done this merely to save others. We thought it best to come forward and receive on our own shield the blows that were being hurled at the Council of the Anthropological Society of London.

The rage and animosity of our assailants is a better guarantee to us than any other that we are doing good work. We only hope that they will continue their attacks. It has been said that no institution or undertaking must be considered safe until it has been well attacked. It is for this reason we hail the assaults made on the *Anthropological Review* and its connection with the Anthropological Society. If the connection is unsatisfactory and cannot be defended, by all means let it be destroyed. The connection, say our opponents, is unique; it is unprecedented! We partly acknowledge it is; and glory in the fact. The question now to be solved is not whether it is unique or unprecedented; but whether it is sound for the interest of anthropological science that it should be maintained? If not, by all means let it be destroyed.

At present we believe that the connection which exists between this *Review* and the Anthropological Society is a sound one, and that it can be successfully defended, as it is of interest both to the Anthropological Society and to the progress of anthropological science in this country that it should be maintained. The attack made by some kind friends on ourselves is a mere illustration of race peculiarity, and arises, we believe, from the cordiality with which the Saxon hates good government. The Saxon is said to hate all successes

every man that has power. Saxons hate us doubly, because we tell them so. We have generally noticed that those who attack us belong to the stupid Saxon type who neither understand nor appreciate the scientific spirit of the age, and whose inordinate vanity makes them suppose that every one else is like themselves. Thus it will be seen that we can study comparative anthropology without going far from home.

The success of the Paris Anthropological Society is, we believe, entirely due to the absence of this Saxon element. Across the Channel they glory in good government, and adopt the best and most powerful organisation. Thus, in the Paris Anthropological Society, it will be seen that Professor Broca holds the perpetual office of Secretary-General, and has more power than any officer in the London Society. This does not give rise to jealousy, but to gratitude. We do not at all complain of the partial difference of feeling which exists in England, because we look upon such jealousy as inevitable. Every man who has power, or who dares to lift his head above his fellows, is hated by both the educated and uneducated Saxon boor.

A short time since Professor Broca when in London was entertained at a dinner by a select party of anthropologists. In answering the toast of his own health, he gave a most interesting account of the rise and progress of the Paris Society, and dilated especially on the beneficial influences which the promotion of the London Society had exerted on the progress of his own Society. He went on to say that the Societies of Paris and London were very much alike. Both had *Memoirs* and both had *Journals*. The London Society also published translations, but the idea of this was not new. On the contrary, one of the members of the Paris Society had, at its first formation, translated portions of Retzius' work, which was not published for want of funds. He, therefore, claimed the priority of the idea of publishing translations! Professor Broca went on to say, "But there is one thing in connection with your Society which we in Paris all admire and envy. It is your English *Anthropological Review*. It is what we long for in Paris. The existence of an independent organ devoted to anthropology in connection with your Society is the very acme of perfection. Your organisation is complete. If we do not follow your example, it is only because we want funds."

If the existence of an independent organ in alliance with the London Society meets with the approval of such men as Professor Broca, we care not what others may think or say. We will now only add, that great as is the estimation with which Professor Broca is deservedly regarded by the majority of British anthropologists, yet he is held in far higher honour by all those who have made his acquaintance. None

who heard him on the occasion to which we have referred could feel other than attracted and charmed with the man. His speech has united more firmly than ever the link which unites together anthropologists of all nations. Dr. Broca's knowledge evinced of the organisation of the Anthropological Society of London, and the relations which exist between it and this *Review*, was sufficient to shame many a British anthropologist. We are only sorry that the speech cannot be reproduced *in extenso* for the instruction of those who have hitherto been too lazy or too stupid to understand the organisation of the London Society. We shall be well pleased that they should receive their instruction from the FOUNDER OF MODERN ANTHROPOLOGICAL SCIENCE.

The prospects of the *Anthropological Review*, the Anthropological Society of London, and, indeed, Anthropological science generally, were never, we believe, so bright as they are at this minute. Nothing is more erroneous than to suppose that attacks in periodicals, or by societies, injure them.

Our enemies are often enemies of the Anthropological Society, and very generally also of Anthropological science. They would first destroy us, then the Society, and then the science.

What would not be given by some of our detractors at this moment to any one who would eradicate that terrible word ANTHROPOLOGY from the English language?

To do this the *Review* and the Society must first be destroyed. It is of course possible that they may succeed in exterminating this *Review* at some distant day, but never the Society or the Science of Anthropology.

We think that we can promise our readers that all the strength of the enemy will be exhausted in killing us. The Society will yet remain as a great fact, and Anthropological science will some day be appreciated, if not venerated, by every man who loves truth for its own sake: and it is for such alone we labour and whose good opinion we desire.

Anthropological News.

THE FINANCIAL POSITION OF THE ANTHROPOLOGICAL SOCIETY OF LONDON.
 —Some wiseacres have recently made what they believe to be a discovery, but which now turns out to be nothing more than a veritable "mare's-nest." On the 4th of February last, when Dr. Hunt took the chair after his election as president, he made some remarks on the financial position of the Society, which were printed at length in some of the daily papers. The *Globe* gave

the address at length. When however the Journal of the Society came to be issued, a kind friend pointed out to a busy-body of the worst type, that portions of this address had been suppressed. Here was a chance for the enemies of the Society! Now would the jealous or disappointed join together to attack the management of the Society! But between February and August the whole aspect of the affair had changed; the financial position of the Society which was not satisfactory in February was eminently so in August. During this period it is well known that the Council of the Anthropological Society had been working incessantly to get the finances of the Society into a more satisfactory condition by calling in the amount due to the Society. In this they have been successful. Some men are either too ignorant or too conceited to master a subject before they write on it, and hence the fiasco which they produce when they appear in print. The following extract from Dr. Hunt's reported remarks on taking the chair are omitted from the Journal of the Society, and as they are the basis of the whole of the attack made on the financial position of the Society we reproduce them here.

After remarking, "But while we entertain a merited contempt for the opposition which is offered to our Society, either from the public or from semi-scientific men, we cannot be too careful to make ourselves thoroughly masters of what is our present position, both in a financial and scientific sense." Dr. Hunt is reported to have gone on to say, "In the first place, therefore, I cannot hide from myself, nor do I desire to conceal from you, that the present financial position of the Society is in an unsatisfactory state: that state is caused solely by the large defaulters' list. The question which we now have to face is the probability that our Society will have to go through the painful stages I have alluded to, before it finally becomes as successful as we all desire it to be. I have been induced again to become your President solely with the hope of averting the dangers which threaten us.

"With regard to our finances, I will now only observe, that if we take our assets and liabilities, we bear a very good comparison with any scientific society in this metropolis. The income and expenditure of this Society, during its brief existence, has far surpassed that of any scientific society ever established in Great Britain. Our income in—

1863	-	-	was	£ 525	10	0
1864	-	-	-	1335	8	4
1865	-	-	-	1555	14	1
1866	-	-	-	1458	9	9
1867	-	-	-	1215	8	1

Total in five years - £6090 10 3

If we compare these sums with the income of similar societies, we shall be better able to understand our present position and our future danger.

"The above sums include our income from every source; but it will be seen that if we compare our income from annual subscriptions, it exceeds that of societies of a similar character. Thus, the Geological Society, whose total income in 1865 was £1900 : 5, only £594 : 16 : 6 came from annual subscriptions, the remainder being produced from Compositions and Admission Fees, and £141 from dividends on Consols; while the amount received by us for Annual Subscriptions during the same year was £1000 : 15 : 11. I do not

propose, however, to trace the history of the fluctuation of the finances of all other societies, but will merely now take one illustration, which will sufficiently serve as a warning to us.

"Thus, we learn that twenty-five years ago, when our active and zealous Fellow, Dr. Richard King, founded the Ethnological Society of London, it consisted, during the first year, of twenty-five Fellows, eight of whom withdrew the next year. Three years later, through the exertions of Dr. King, the income of the society was raised to £299 : 12 : 9. Some changes then took place, and after a little time it ceased to publish anything. For nearly seven years it remained in a state very much resembling death, until, in the fifteenth year of its existence, it had no more than thirty-three paying members, with an income far less than its expenditure, and barely amounting, by annual subscriptions, to £50 per annum; besides this, it had incurred a very considerable debt. How it survived this well nigh hopeless state, and how by its attempts to do so it sealed its own fate, I need not now stay to inquire. Suffice it to say that although the presence of ladies at the meeting might have conduced in some small degree to free it from its pecuniary embarrassments; yet, from the time of their admission, it has lost any claim to be ranked as a purely scientific society.

"We now learn, however, from the last balance sheet of that Society for 1866-67, just issued, that the income from all sources was only, for the year, £299 : 18 : 4. It has no funded or other property to compensate for the amount received for Life Compositions, which now amount to twenty-five per cent. of its Fellows.

"With regard to our Society, all our life compositions are amply secured, and invested in property, consisting either of furniture, books, or copyright, and stock of translations, etc.

"In reference to our income, I feel very strongly the great necessity there is at this time for zeal and unity of action on all sides. It is alone by zealous co-operation that we can hope to escape the financial ordeal through which other societies have had to pass.

"Of our finances, I will only observe that, taken as a whole, they are rather better than when our present Treasurer took office. I think all will join in an endeavour to render them still more satisfactory. It is no small matter that we have undertaken to do, nor can it be effected without a considerable sum of money, and a large number of real workers and a still larger number of paying Fellows.

"My suggestions would be to relinquish all schemes which were not contemplated in the original formation of the Society. We had better do a little and do it thoroughly, than embark in doubtful enterprises. We have plenty of good scientific work before us, and now will come the test of who are the real lovers of science for its own sake. The history of the Society during the next few years will be of more importance in deciding its future character as a scientific body than that which it has effected in the past. Now we have not only our past experience to guide us, but we must feel also that many plans and schemes attempted in the early history of a society are no longer admissible when we have a scientific character to sustain and consolidate.

"On taking the chair to-night as your President, I do so with a full knowledge that I have undertaken a most difficult and responsible position. The experience of former years has taught me that no man can properly fulfil the duties of this office without a very considerable amount of trouble and great anxiety. I can also assure you that the duties belonging to the office of

Director are equally exacting, and perhaps more laborious. Neither the Director nor myself hold our respective offices by our own seeking. Indeed, no man can or will ever be elected to either of these offices by his own desire. It is alone a man's colleagues whose right and whose duty it is to call on him to assume office. Why I am not allowed to "rest and be thankful" I know not; but I trust that I may be able to do so at no distant day.

"In the meantime I will only add that my efforts shall be devoted (as far as my health will allow me) to a sincere endeavour to establish the society on a firm basis, and that I will do all I can to promote its material prosperity, and to sustain the dignity and importance of the science.

"I will only ask from my colleagues that support which I shall in my turn be ever ready to give to my successors,—and of the Fellows of the Society generally, and the Council, that unanimity of action and feeling by which alone great events and great deeds can be accomplished.

"In conclusion I would desire to beg of those who take part in our discussions, to remember in the future that we shall do well to avoid, as far as possible any appearance of speaking as though we were fighting for victory and not for truth. Science cannot be advanced if its problems are discussed as party or personal questions. At present I believe we are more free from this danger that we have ever been before. Those who object to our non-acceptance of the biblical account of man's formation as the starting point of our inquiries we can now consign to the 'Victoria Institute;' and those who, from diseased livers or disappointed ambition, cannot discuss scientific questions without a childish exhibition of temper, to the softening influence of the female sex, at the Ethnological Society.

"I trust that by our united efforts we may ere long be able to declare that our financial and scientific position is both consolidated and finally and permanently assured."

Now some of our readers may ask by whose authority were these extracts omitted? The answer to that question is we believe excessively plain. Not half, or perhaps a quarter, of what is said before the Society is ever printed; what shall be printed is, we believe, decided by a Publication Committee. We think in this case they made a mistake, as it has given a chance to the enemies of the Society which they have not been slow to avail themselves of. We trust that the castigation that one of such scribblers has received from the Council of the Society will be a warning to others who feel inclined to travel the same dirty path, in order to obtain a temporary notoriety as great financial authorities or as reformers of scientific societies.

EARLY MAN IN ITALY.—In a small but most interesting memoir, entitled "*Antichità dell' uomo nell' Italia Centrale*," 8vo., Prof. Nicolucci gives an account of certain excavations made in June last, which afforded him the opportunity of confirming the existence of implements worked by human hands, in the upland gravels (*banchi diluviali*) of the Tiber, in the neighbourhood of Rome. He has collected them from the cave-gravel at Pontemolle and at Tor di Quinto. It is to be regretted that the section of the gravel which he states he laid before the Academy has not been published, but the conditions of deposit seem to be the following. A vast alluvial deposit near Rome extends over the land at a level of more than thirty metres above that of the winter floods of the Tiber, and is composed of sands and breccia irregularly mixed together and disposed in very uneven beds, which the author considers due to the changes in deposition produced by the variable currents of the great stream. This material consequently represents *detritus* brought from all the beds over which the

river flows; chalk and flints from the jurassic, cretaceous, and eocene rocks, which constitute the Apennines; and breccia and volcanic materials from the sub-Apennine lands.

The worked flints are found throughout the whole extent of this deposit, and most commonly at a depth of ten to twelve metres from the surface of the soil. They consist of knives, arrowheads, lanceheads, scrapers, wedges, and all are of such rude workmanship that they almost appear to be natural productions instead of works of art; they are all chipped from flints usually either yellowish and translucent, or greyish opaline, and which evidently are not derived from the neighbouring hills, but have been brought by the river from the central region of the Apennines. In the same beds are discovered the remains of large extinct pachyderms (*Elephas antiquus*, *meridionalis*, *primigenius*), mixed with those of such contemporary animals as meles, felis, testudo, &c. It may be noted that Prof. Nicolucci does not mention the species of *felis* here discovered.

These are not the only discoveries. The brother Indes explored a bone-cave at Monte delle Gioie, near Ponte Salara, where he found stone weapons and utensils associated with *elephas primigenius* and other extinct animals. When, however, father Secchi and MM. Ponzi and Rossi visited this cave, it was found to have had the strata so disturbed by the excavations of the first discoverer, that precise evidence of the locality where each respective object was found was unable to be brought forward.

Prof. Nicolucci speculates on the probable amount of physical changes which the adjacent territory has undergone since the time of the deposition of these implements. He is apparently inclined to refer more to cataclysmal action than is the custom in England.

A description of the objects found, and a notice of some analogous discoveries in the island of Capri, close the present interesting little memoir.

DR. C. CARTER BLAKE returned from Nicaragua in the middle of July last. We believe that it is his intention to contribute a paper on the natives, both Indian and mixed breeds, during the ensuing session, to the Anthropological Society; and that he will also lecture on "Central America, its physical features, population, and resources," at Hull and other places.

CELT AND SAXON.—We are glad to notice that the public papers are beginning to call the attention of their readers to the writings of Dr. Knox on "Comparative Anthropology." The following is extracted from the *Pall Mall Gazette* of Sept. 11, 1868. Speaking of the lectures which Dr. Knox published twenty years ago on Race it observes,—

"These papers were distinguished by boldness both of language and assertion, but they bear the marks of profound conviction, and though they prove the author to have been almost a fanatic in his faith, some of his observations are highly suggestive. Indeed, for the force and truth contained in them, and as far as they can be gainsaid, many of them might have been written at the present moment instead of a score of years since. His theories concerning Celt and Saxon, and the extent to which they are supported by experience should be of interest just now; and even if the English public refuse to consider them they will thereby but so much the better prove his words, since, according to Knox, the Saxon is ever prone either stupidly to ignore, or with arrogant incredulity to deny and mock at, the laws of race: 'All other races and all other men he holds in utter contempt.'

"No doubt, calmly considered, the present state of things is from one point of view sufficiently extraordinary. On the one hand, in London alone, within

a very short space of time there have been some scores of robberies committed in our streets, many in the full light of day, most of them accompanied by a brutality and violence perfectly sickening. Policemen are kicked until they can scarcely move; women have had their heads and faces battered until they lost all likeness to humanity, they are knocked down, robbed, and insulted; men fare no better; lookers-on exhibit no indignation, and offer no assistance either in protecting the victim or arresting the guilty parties; and even policemen are beginning to content themselves with following the miscreants at a safe distance until they meet with a brother constable to aid them. Then let us glance at Ireland. It is at the present moment free from crime to a degree that may well make Londoners sigh to think of. The judges go about the land finding little or nothing to do. In one place it was stated that these august personages, together with the jurymen and barristers, went forth to play at cricket; in others white gloves were presented, in token that there were no prisoners for trial. Everywhere the judges congratulate the authorities on the remarkable absence not only of serious crime, but of almost any kind of crime at all. But let us strike a little deeper into the strata of humanity. Mr. Kingsley, presumably with reference to his own countrymen, says that every man has something of the blackguard in him; and we may admit that the genuine 'rough' is an Anglo-Saxon product, but in the Celt there is even in quiet times something of the wild cat, and if he is exasperated on certain subjects, when he conceives himself insulted or oppressed, sometimes also at the mere sight of blood shed in fight, he develops traits which suggest a cross with the tiger. Thus even while the sunshine lies on the Irish landscape there are clouds in the horizon which indicate not one electric explosion, but many, and passions altogether human will be appealed to and gratified in the name of religion. Only very lately some hundreds of Irish Catholics lay hidden in a glen all night, in the hope of a battle next day. Nor did they hope in vain. The Orange party walked forth in the early morn, the customary affray ensued, blood flowed pretty freely, and a score of men got broken heads. In fact, no sooner is the green or orange colour displayed, or the obnoxious tune heard, than every Irishman arises in his strength, trusting, as one of them said, that 'when God provides a shillelah to strike, he provides a pate to break.' At another place something like a battle took place; the Orange party had to fly for their lives, firearms were used, a certain number of the combatants were killed, and when the bodies of these persons were borne to the grave nearly a thousand excited human beings knelt down with bared heads before the house whence the shots were fired, and invoked Heaven's curses on the murderers. Then there was a long silence, and they all rose up and followed the funeral procession, the women wailing, shrieking, and keening, as is their wont; for Irishwomen, in rags, dirt, and untidiness, have always their wits and their tears ready for their country's service. But time would fail us to tell of all these affrays; one is very much like another, and they are reproduced in England in exactly the same form wherever the same causes exist and there are a sufficient number of Irish to take advantage of them. There may be good times or bad times, and, in the sense we mean, these bad times are bad for reasons which Englishmen cannot even guess why or wherefore they have power to enrage or depress the Irish nature; but so long as the Celtic race exists these scenes will recur.

"Knox believed that neither climate nor anything else can permanently influence, far less change, the type of a race. Destroy a race it may, and does, but never converts it into anything else. No race, according to him,

could occupy, colonise, and people a region of the earth to which they are not indigenous, and he believed in the physiological law which extinguishes mixed races. Intermarriage between them only affects them temporarily; the stronger or more numerous absorbs the other, and the offspring revert to the old type. Of the Celts the Gallic preponderates in numbers; then comes the Irish, and afterwards, at a long distance, the Welsh, Canadian, and Caledonian Celt. Of the Iberian Celt he makes no mention. Let us examine a little Dr. Knox's assertions concerning Celt and Saxon, for though arrogant enough—he claims to be the descendant of John Knox—they are often amusingly true to this day. The Celt is of all races the most military in the world—not more, not perhaps so courageous as the Saxon, and far less self-reliant, but essentially warlike. He delights in battle and bloodshed. 'From Brennus to Napoleon the war cry of the Celtic race was, To the Alps! to the Rhine! This game, which even still engages their whole attention, has now been played for nearly 4000 years.' It is the Celtic nature; the Celt cannot change it if he would. His natural weapon is the sword; knowing his weakness in the torso, he does not wrestle or box. It is to him that the Saxon must look for aid if ever Russia threatens to overrun Europe, and this has already occurred once. In religion, whether Roman or not, he is always Catholic. 'The Saxon may take his religion from his lawyer, the Celt will not.' The Welsh Celt and his Cornish brother are Methodists. They favour revivals and love feasts, and among them mormonism obtains easy victories. When the Caledonian Celt is not a Catholic he is still rarely of the Established Church; he is to the backbone, like all his race, credulous, imaginative, a seer, a prophet, or a poet. But the great majority of the race are Roman Catholics, in which religion they find a hundred consolations, and every conceivable method of indulging the imaginative faculties. When the Celt violently casts off this religion, he almost invariably becomes a Jacobin sceptic or a furious democrat. Many of the French Celts act thus, nevertheless they often elect to die in the faith in which they refused to live. The Celt is dirty, indolent, brave, irascible, and treacherous. Not because he is a Catholic, but because he is a Celt, for which reason also he is a Catholic. 'Seignories, monkeries, nunneries, feudalities, do not form, neither do they modify the characters of any people; they are an effect, not a cause. Let chroniclers say what they will, they indicate the character of a race, they do not make that character.' He is unable to understand, or even to enjoy constitutional liberty; he craves for a scientific administration and a swift wise despotism. Preferring revolution to reform—in this differing from the Saxon—he no sooner obtains his liberty than he hastens to elect a tyrant."

THE ANTHROPOLOGICAL REVIEW AND THE ANTHROPOLOGICAL SOCIETY.—The following particulars respecting the *Anthropological Review* may interest some of our readers. The reason of their publication is to enable the Fellows of the Anthropological Society to have some data on which they may be able to form an opinion respecting the desirability of the acceptance of the copyright, which has been offered to them unconditionally, and free from debt:—

60, Paternoster Row, Sept. 12, 1868.

There seems to be a very considerable misunderstanding amongst the Fellows of the Society respecting the connection which actually exists between the *Review* and the Anthropological Society. The *Anthropological Review* is not, and never has been, any more under the control or influence of the

Anthropological Society than is the *Athenæum*. The sum paid for the *Anthropological Review* includes the printing, binding, circulating, and advertising the *Journal of the Anthropological Society*.

With regard to the birth of the *Anthropological Review*, it owes its origin to a period long anterior to the advent of the Anthropological Society, and was originally intended to be published in 1860, under the title of the *Quarterly Journal of Ethnology*. When the *Anthropological Review* was started in 1863, it was not intended to become in any way the organ of the Anthropological Society. The very identical terms on which the *Anthropological Review* undertook to print the *Journal of the Anthropological Society* were offered to and declined by the Ethnological Society.

Those interested in the progress and popularisation of science in this country, may be perhaps glad to know some particulars respecting the early financial history of a scientific periodical, which has become in such a short period so influential as to attract public attention, and so powerful as to be the fear of all those who desire to stifle free inquiry and discussion respecting Anthropological Science.

Cost and receipts of the *Anthropological Review* and *Journal of the Anthropological Society*, for five years, 1863-7 inclusive:—

Dr.	£	s.	d.	Cr.	£	s.	d.
Printing and binding				Received from Anthropological Society of London, to Dec. 31st, 1867	1501	5	6
Nos. 1 to 19 . . .	1555	15	11	Due from ditto on Dec. 31st, 1867 . . .	312	10	0
Advertising . . .	450	0	0	Received for sale of copies and advertisements, per publishers, up to Dec. 31st, 1867	513	1	7
Translations,* articles, sub-editing, &c., as per receipt	500	0	0	Deficient to Editor . . .	539	18	10
Honoraria to authors of articles not included in the above sum . .	21	0	0				
Books bought for contributors . . .	12	0	0				
Engravings . . .	35	0	0				
Reporting . . .	20	0	0				
Three annual dinners to contributors during first three years . . .	70	0	0				
Postage of free copies of <i>Review</i> and miscellaneous expenses at £5 per No. . . .	90	0	0				
	£2866	15	11		£2866	15	11

So much for the curious; and now for myself. It will be saving me much trouble in answering questions if you will allow me to inform those of your readers who do not know it already, that I originated and have since maintained the *Anthropological Review*; that for six years I have been its sole responsible Editor; and that having been during that period more than repaid for my expenses and trouble in the pleasure I have received thereby, I mean to continue my labours in exactly the same spirit as heretofore.

To all, therefore, whom it may concern, I give notice that I have reserved for my own life the control of the editorial department of the *Anthropological*

* In this item are included translations of many articles which have not yet been printed.

Review, as long as it is not the property of the Anthropological Society, and that it will afterwards be managed by trustees whom I have appointed for that purpose.

The profits which may arise from the sale of the *Review*, as long as it is connected with the Society, will be devoted to the foundation of a medal in the Anthropological Society. It is possible, however, that the Society could conduct the *Review* at a smaller expense than a private individual is able to do. It is for this reason that I have urged, and still urge, the Anthropological Society to accept the copyright of the *Review* unconditionally and free from debt.

With regard to the policy, expediency, or morality of printing the Journal of the Society in connection with the *Anthropological Review*, I shall be happy to give my best thanks to any one who will inform the Council of the Society of a cheaper and, on the whole, a better plan of distributing and advertising their Journal.

Whether the Fellows of the Anthropological Society think it right to publish their Journal at the end of the *Review*, or in any other way, is a matter which alone concerns them. They have often had, and will soon have again, opportunities of expressing their opinion on this point. As matters now stand, I feel bound to continue my labours as Honorary Editor, and to pay the penalty of such distinction if only for the benefit of the Anthropological Society. While however saying this I am fully conscious of the important services which the *Anthropological Review* has in its power to render to the progress of Anthropological Science, not only in this country but throughout the civilised world. I believe that the *Anthropological Review* supplies a want of the time, and, whether it is supported or opposed by the Anthropological Society or any other learned body, it will still continue to perform the duty for which it was originated.

JAMES HUNT.

DR. J. C. NOTT, Hon. F.A.S.L.—The following letter, addressed by Dr. J. C. Nott, late of Mobile, and now of New York, the eminent anthropologist, to Mr. Kenneth R. H. Mackenzie, F.S.A., F.A.S.L., of London, will be read with interest and satisfaction by the scientific world, as it removes to a remote period the great loss anthropological science would have sustained by his premature demise, of which rumours have been current.* The letter arrived too late for insertion in the last number of the *Review*.

"New York, 12th June, 1868.

"No. 16, West Twenty-third Street.

"Kenneth R. H. Mackenzie, Esq., F.S.A., F.A.S.L.

"My dear Sir,—It is but seldom that a poor mortal, particularly an outside barbarian, enjoys the high privilege of reading such a eulogy of himself in a London periodical, as I am indebted to you for in the last number of the *Anthropological Review*, and for which I take this opportunity to return you my most grateful thanks. This is the third time I have been killed off, and had my good deeds ventilated, without an unkind word about the bad ones.

"It grieves me sadly to think you may have all your work to do over again one of these days; and were it not for fear of damaging the reputation of the Society, I would gladly hang myself, and stop my career just at this fortunate juncture, when I have made all the reputation I am capable of, and far more than my vaulting ambition ever aspired to. But, as Mr. Webster

* Journ. A.S.L., vol. vi, pp. lxxix-lxxxiii.

said, in the delirium of his dying moments, 'I still live,' and will live in your *éloge*, but with the melancholy reflection that I can add nothing to my fame, and must put you or some other friend to the trouble of burying me a fourth time.

"At a meeting of the New York Ethnographical Society, a friend, quite to my surprise, and the amusement of the members, produced a sensation by producing and reading the eulogium. This was the first meeting I had attended, and it made quite a merry introduction to all present.

"The mistake with regard to my death doubtless arose from the fact that I lost a brother, Dr. G. A. Nott, Professor of *Materia Medica*, of the Medical School in New Orleans, a few months ago.

"I was, when our terrible civil war broke out, living in Mobile (in the Confederate States), and, through *cordon* by land, and blockade by water, was cut off from all outside resources, and did not, for four years, see a new book from Europe. After the close of the war, for two years I was battering about, looking for a home and a country; and, about a month ago, came to pitch my tent in New York with my family and the fragments of a fortune saved from the horrors of civil war, and here I hope to live and die.

"I, for six years past, till I came to New York, have not seen even a number of the *Anthropological Review*, to say nothing of the many valuable books published during that time; I am now, however, in a congenial atmosphere, and am posting up as fast as I can.

The problem of race is now being worked out in our country with a vengeance, and on a large scale. I send you a little *brochure*, written at the request of the editor of the New Orleans *Medical Journal*, and published two years ago. It will show you what I then thought about the negro; and all that has transpired since is but a fulfilment of my predictions, which are the plain teachings of anthropology.

"The condition of our Southern States is such that no white man belonging to the soil, who has any self-respect, can live there longer; and for this reason I have quitted the country in which I have lived and prospered for thirty years. The rule at the South now is one not only of austere despotism, but of negro domination. Just think of the old state of South Carolina, with her chivalrous population; the native white population is disfranchised, and the legislature is now composed of one hundred negroes and fifty white, worse than negroes, who cannot read or write. The whole legislature and the civil officers of the State pay but £150 *tares per annum*, and a tax is levied of £400,000! This is a hard fate for a people who fought for principles, and for a construction of the Constitution, that had been at various times acknowledged and endorsed by all of the old thirteen States that framed the Constitution.

"But, my dear sir, I did not sit down to bother you with politics, but merely to assure you I still live, and hope to have much enjoyment out of the proceedings of the Anthropological Society.

"Very respectfully your obedient servant,

"J. C. NOTT, M.D."

To this letter Mr. Mackenzie replied in the following terms:—

"To J. C. Nott, Esq., M.D., Hon. F.A.S.L.

"My dear Sir,—I am truly glad to receive your welcome communication, and apologise for killing you without a licence. Long may you live to enjoy prosperity, good health, and the satisfaction of seeing the science you have contributed so much and so firmly to establish received in all parts of the

world with the respect it so eminently deserves. I cannot, however, withdraw any expressions I have used in the brief notice I was honoured by being allowed to draw up for presentation at our anniversary meeting last January.

"Your leisure will, I trust, now admit of your resuming the studies interrupted by the late unhappy political condition of the United States, and it is to be hoped that the world will, ere long, profit by your labours, as it has done heretofore.

"What you say on the condition of the black race in America is indeed melancholy, and I fear, even under the wisest legislation, it will take a very long time ere the country will recover from the blow this has aimed at the general prosperity. I have no faith in the advancement of the negro in social life, and over here I have had ample opportunity of seeing coloured people of the best stamp. Las Casas, indeed, left a terrible legacy to the New World, by his supposed humanity.

"I remain, my dear Sir, most faithfully yours,

"KENNETH E. H. MACKENZIE, F.S.A., F.A.S.L.

"London, July 31st, 1868."

THE MANCHESTER ANTHROPOLOGISTS.—Our readers will not be surprised to learn that the Anthropological Society of Manchester is just now in a position of great difficulty, owing to a difference of opinion respecting the discussion of missionary enterprise, and also as to the utility of printing reports of their discussions. No one who knows the foul means which have been used by some parties to arrest the progress of the Anthropological Society of London will be surprised to hear that every sort of difficulty has to be encountered by the anthropologists at Manchester. When this Society was started such a result was expected. A provincial city is a very different place from the metropolis, and we are not therefore surprised that, with pressure from outside and from some differences of opinion from within, there is a chance of the Society suffering very materially. In the first place we ought to say a few words on the discussion which took place last year, and is just about to be re-opened at their first ordinary meeting by the reading of a paper by their President, Mr. George Harris, "On Foreign Missions in Connection with Civilisation and Anthropology." We are fully conscious from reading the public papers last year, and also from what we have since heard, that a great deal of misconception exists as to their object in discussing such a question. There is even amongst themselves a difference of opinion respecting the desirability of discussing such a subject. We thoroughly sympathise with the fears, and admire the manner in which these gentlemen have shown their objection to the course the Council of the Society has decided in taking in this matter. It is their good fortune to have only elected as Fellows those who have shown by their conduct that they are in every sense really gentlemen. This ought to be for them a matter of most sincere gratification, for such can be said of comparatively few other scientific societies. It is, therefore, no small satisfaction to know that, although there is a considerable difference of opinion amongst them as to the advisability of discussing the subject of Christian missions, yet we have the satisfaction of feeling that they are all animated in this matter by one spirit, and that those who desire the subject to be discussed, and those who object to any such discussion, are alike influenced in their opinion solely by an honest desire to do what is best for the interest of the Society and of the science. While we sympathise with those who have retired because this subject is to be discussed, we trust that their fears will prove groundless. We suspect they had good cause to

fear the result on the future progress of the Society. Our past experience leads us to express the belief that the seceding members have shown the greater wisdom; but that the Council has evinced the greater moral courage. Both parties we know are equally zealous and honest: and both equally in the right. Had we taken part in the discussion, we should have sided and voted with those who have temporarily left the Society. The President of the Anthropological Society of London has been appealed to by the Fellows of the Manchester Society. By one party he has been asked to try and prevent the discussion from taking place, by the other to support the decision of the Council. His reply to both parties is as follows:—

“Anthropological Society of London, 4, St. Martin's Place, W.C.

“September 4th, 1868.

“MY DEAR BRETHREN,—Let me first say most emphatically that when a choice has to be made between the good of science and the good of a society, I, for one, would never hesitate as to which course I should adopt. Your Council are in that position. The discussion of the influence of Christian missions has been forced upon them. You are suffering from one of the inevitable effects of the sins of your parent, the Society in London, over which it is my honour but misfortune to preside. I well remember the discussions which took place before the Anthropological Society of London, and the difficulty I then had in keeping the speakers to the subject in hand. The Society, however, determined that it should be freely and fairly discussed. It was at that discussion that Bishop Colenso first made his appearance before a London audience after his return from Natal. How we came to survive the storm which beset us on that occasion I hardly know. On all sides I was told that the Society could never recover such severe shocks as it continually receives from those pestilential publications called religious newspapers. The character drawn of our Society on that occasion is very much the same sort as that which such papers as the *Morning Advertiser* recently gave the British Association for the Advancement of Science, and as other papers are now giving a somewhat insignificant body in London, called the ‘Dialectical Society,’ which is presided over by Sir John Lubbock, Bart., he having his right-hand man, Professor Huxley, for one of his vice-presidents, and Lord Amberley for his occasional substitute in the chair. Now, hard blows do not kill societies, but sometimes they destroy a man's character with the ignorant masses who at present inhabit these islands. Nothing could be more universal amongst the religious and Radical press than the condemnation of our Society for daring to discuss the effects of missionary efforts on savage races. You will naturally be anxious to know what was the result? On looking at the history of that period, I have no hesitation in saying that the discussion, on the whole, did us good. It produced, it is true, a secession of members, and a little disturbed our balance sheet; but if it injured us financially, it benefited us scientifically. We were told that it had done the missionary societies good and increased their incomes. Ever since we have been expecting some sort of return, and our treasurer has been fondly hoping that he might receive a substantial acknowledgment of the good we did them. Now, the fact is discussion always does good to the right cause. It looks suspicious if missionaries cry out against discussion. On the contrary, I cannot but think that in the end missionary societies, especially those connected with our National Church, will come to see that we are promoting their interests very materially. By pointing out their failures, we do them a service. If it can be

shown to a rational man that by turning a Mahomedan Negro of West Africa into a Christian Negro, you make him a far worse character, mentally, morally, and physically; then I doubt if such a one would advise a continuation of a process of mental, moral, or physical debasement. Many persons who have travelled in Africa make such an assertion; it will be for you all, if possible in the same spirit to examine into the truth of such a charge. I hope your chairman will strictly bear in view that your Society does not want to know what men believe about this matter, but what they absolutely know from observation or from the writings of others. The opinion of missionaries must be taken from their own words, and not as they issue from missionary societies, unless it is affirmed that all these reports are printed exactly as they are sent home. That Christian missionaries have done good to savage races is most undoubted. But the question is, could they not in some cases do more good? I will not even hint by teaching Mahomedans, but leave the *how* entirely for their own consideration, feeling sure that if they are bent on doing good, they will, if practical philanthropists, find a way without persevering in Utopian crochets.

"Having said so much let me now say a few words on the probable effects of your discussion on your future history, read by the light of the experience of your parent society. At the conclusion of our discussion on the subject a small party of about twenty gentlemen decided on withdrawing from us, and founding another society which would devour ourselves and many other scientific societies. It was formed under the title of the "Victoria Institute," and has always been presided over by that once popular favourite, the Earl of Shaftesbury. I have attended the meetings on one or two occasions, and, unlike the 'Dialectical Society,' I have never found any subject discussed which was not entirely appropriate for a mixed audience. Of the twenty members ~~we~~ lost on that occasion there was only one whose loss we had greatly to deplore, and that was Mr. James Reddie, the zealous honorary secretary of the Victoria Institute. He is a man of crochets with a brain producing wonderful illusions, but one whose speaking always produced laughter, and who is at the same time a scholar and a gentleman. It is, however, most desirable that there should be only one 'Victoria Institute, or philosophical society,' for their philosophy consists only of allowing men of one opinion to enjoy the pleasure of membership of their body. No one can join as a member who does not profess to believe in the theological creed laid down in their rules. This you will no doubt admit is a novel way of pursuing philosophic or scientific investigation; indeed, to call such a body a philosophic society is a monstrous absurdity. The time, however, seems fast approaching when some standard of merit, character, and perhaps of opinion, shall be sought for in all those who are anxious to join a scientific body. With regard, however, to the influence of the Victoria Institute on the progress of anthropological science in this country, it has absolutely produced no effect whatever. This association, although calling itself a scientific body, has really no claim to such a title; it merely exists, and is only interesting as the outcome of the discussion of the subject of Christian missions which was held before the Anthropological Society in London. It was started in entire ignorance of the aim and objects of the London Society, and had it not been founded in the heat of controversy would most assuredly have never come into existence at all. It was then thought, as some now think, that the object of the society in discussing such a question was to injure or expose the uselessness of Christian missions. Never, can I assure you, was

there a more erroneous supposition; we then, as I hope you are now doing, merely desired to know the truth. To state that our object was to attack missionary enterprise is to entirely mistake the facts; the language employed by the advocates of missionary enterprise towards the conduct of the London Society on that occasion was certainly not calculated to inspire the frame of sentiment with which some anthropologists then delivered their opinions.

"I trust that nothing which was said by either party in the excitement of that celebrated debate will now be brought into your discussion. Let both parties give each other credit for a sole desire to know the truth, and I do not fear but that good will eventually come from your discussion. I do not think, however, the day has yet quite arrived when such a subject can be discussed with any great advantage to the progress of science. That some scientific men are animated by a desire to expose what they consider the uselessness of Christian missions, is a fact of which there can be no doubt. Other supporters of such a discussion may be influenced by a desire to injure the Christian religion itself. Such sentiments did not, however, animate the Council of the London Society on that occasion; and I feel equally sure that entirely different sentiments now exist in the breasts of the President and Council of your Society. Let both parties in such a discussion bear strictly in view that truth, and not victory, is the sole legitimate object of all scientific inquiry and discussion; and I have little fear that missionaries will have the sound sense to perceive that anthropologists who in such a spirit conduct their investigations, are really the best friends of missionaries, while anthropologists will, on their part, perceive that missionaries are valuable workers and experimentalisers for many difficult anthropological problems. I cannot, indeed, imagine an anthropologist desiring to put a stop to missionary enterprise. If I heard of one, I should class him in a special category, and he should have for his associates men, although neither idiots nor lunatics, still more objectionable than either. Men afflicted with a combination of vanity and imbecility do, somehow, find their way into every scientific body. They are a disgrace to every Society to which they belong. Some of such characters are *habitués* of many of the London societies. To see their name in print is the sole object of their lives. To discuss with such men is to pay them real homage; while to morally kick them in public is an honour of which they are proud beyond measure. I speak thus plainly, because I know that men who sometimes take part in the discussions before London societies, unfortunately for themselves, often get their speeches reported. Professor Levi, the other day, at Norwich, in reading an admirable paper on Scientific Societies, spoke of the great advantage of a report of the speeches at scientific societies. Our Society in London is nearly the only scientific society in which this plan is adopted. While agreeing with Professor Levi as to the value of these discussions generally, as a means of advancing scientific inquiry and thought, I cannot, at the same time, hide from myself the practical difficulties of such a proceeding. The editors of the journals of scientific societies have the painful duty of applying the pruning knife to such speeches. Never are they able to give satisfaction. I say this, because I want to impress on you that a Society must not be held responsible for the report of some of the speeches which appear in their Journal. At the same time, I cannot but think that the Councils have hitherto been remiss in not issuing strict orders to the secretaries never to insert the speeches of such ranters. Professor Levi, I feel sure, hardly knows the diffi-

culties caused by an official report of the proceedings of our scientific societies, or he would hardly have treated the matter as one purely of unmixed advantage. That it is desirable, I never doubted; but that it is difficult, I am equally sure. Professor Levi spoke of a "judicious abstract" of the discussion. The only really judicious abstract that I could make of some of the speeches occasionally delivered at societies which I frequently attend, would be their entire omission. At the end of last year, the council of one of these societies issued orders to the editor to condense the discussions. This order produced such a "storm in the teapot" as was never before seen. These men do not form a very large percentage in any scientific body, but they league together and demand, in their own peculiar and eccentric manner, to know why their speeches are not reported? The crisis in the history of a scientific body becomes very serious when the speeches of such men are condensed or omitted. Such kindness, I can assure you, they do not appreciate; and, under such circumstances, I should like to ask Professor Levi's advice. How would he like to have the well-nigh impossible task of making a "judicious abstract" of the speeches of some who may attend the society with which he is connected—that well-managed, prosperous, and most useful body, the Statistical Society of London? I mention this here, as having a most practical bearing on the form which your published proceedings shall take. My advice on this point you have sought, and, such as it is, I give it freely. While advocating a "judicious abstract" of the remarks made by the various speakers at the reading of papers, I cannot disguise from you that such a proceeding is attended with great difficulties and great dangers to all who desire to live at peace with their fellows. The poor editor of our journal has made three or four enemies for life by his daring in condensing and putting into English and sense a report of some remarks made at our meetings, or by putting his pen through childish puerilities which, by some strange and unaccountable accident have, in a most marvellous manner, found their way into some of the papers read before the Society. In one instance the editor even dared to follow the custom of the society for five years, and not report the speeches at the general meetings. This brought down upon him emphatic condemnation. How he manages to survive and serenely enjoy life is a mystery. It is only, I believe, because he feels he is doing his duty; and the character and style of his condemners, is the best proof of his kindness and wisdom. If, therefore, you decide on giving reports of your speeches, you must be more careful than many other scientific societies are in the selection of members; or, without such care, you must be content to continually hear a piteous cry, or bombastic declamation, from the poor wretches who do not perceive how kind the editor is to them. On the whole, I think it best to advise a "judicious abstract" of the discussions which take place before any really scientific society. The true nature and real origin of such cries or declamations of these zealous reformers, will soon become apparent to you should you ever have the misfortune to admit amongst you such a person. I have attentively read your reports from the first, and take this opportunity of saying that I think, on the whole, you will do well to follow the example of your parent society, and print an abstract of your discussions.

"I must end as I began. Do not surrender freedom of discussion to save your society. On the contrary, rather let your society die a public and immediate death, than give up your right to discuss the success of missionary enterprise, or any other subject which you consider comes within the range

of anthropology. We are all engaged in fighting for principles, and not for the success of societies. It is really because love of truth is so strong, that we are hated, and not because our society exists. The science of anthropology has now become a power not only in England, but in Europe. The triumph of anthropology means the downfall of superstition, fanaticism, and sentimental philanthropy. Are these objects not worth fighting for? Your success will depend on your own efforts. Believe me, ever yours faithfully,

"JAMES HUNT."

THE ANTHROPOLOGICAL AND ETHNOLOGICAL SOCIETIES.—Failure of the Amalgamation Scheme.—In the Journal of the Anthropological Society for the quarter will, we believe, be found the official reports of the delegates of the Anthropological Society respecting the failure of the amalgamation scheme. In our last number, we stated that it failed owing to the objections which Sir Roderick Murchison, and other members of the Council of the Ethnological Society, raised to the word Anthropology. We shall be glad to know that such a report is not true. It may be true that, in a moment of forgetfulness, Sir Roderick might have expressed himself against the word; but, as he stated distinctly in the *Pall Mall Gazette*, that he proposed Professor Huxley as president in order to effect an union, we cannot believe that he would willingly give up such a scheme on account of his objections to the word anthropology. Nor can we credit that Sir Roderick Murchison would have raised one word of objection to the proposal made by the Council of the Anthropological Society, that the selection of name should be left to an united general meeting of the Fellows of both Societies. Never, we believe, were fairer terms offered; and we think there must have been some untold reason why this proposal was not accepted. We shall be very glad to know why this proposal was refused by the Council of the Ethnological Society. This is a question which we think the Council of the Ethnological Society should answer most distinctly. We do not doubt that there were objections to such a plan; but why frustrate the union rather than submit to trifling inconveniences? We confess that, for our part, we at present look with grave suspicion on the fact that this proposal was not accepted. Some of our correspondents hint that this amalgamation of the two societies was desired by the Council of the Ethnological Society on other than purely scientific considerations. We feel bound not to believe this insinuation. We have heard the delegates of the Anthropological Society speak in high terms of two of the delegates of the Ethnological Society, Professor Huxley and Major-Gen. Balfour. We have also heard strong terms used by them respecting the conduct of the third member of the Ethnological committee. It has been rumoured in several quarters that, but for the manner in which Mr. Hyde Clarke misrepresented the finances of the Anthropological Society, the difficulties respecting the acceptance of the name "Anthropological" as the best that could be found, would have been carried in the Ethnological Council, although, perhaps, not unanimously. We commend the attention of our readers to the official reports in the Journal of the Society. The following correspondence may also help to throw light on this question. We need now only add that Dr. Richard King, who is a member of both Councils, has already publicly declared that the negotiations failed simply and solely on the question of name; and yet Mr. Hyde Clarke openly affirms that the negotiations failed on financial grounds, and published this as a fact; while a fortnight later he declares that the amalgamation was frustrated by one person, and that person the one who is known to have desired it more earnestly, and

done more to forward it than any other living man. Why do not the Society appoint a committee of physiologists and pathologists to make a report for their guidance in the treatment necessary for this unique anthropological specimen? We now merely publish the following correspondence:—

“The Anthropological and Ethnological Societies.

“Fleetwood House, Maida Vale, W.

“21st Sept., 1868.

“Sir,—I beg leave to say a few words upon the dispute which has arisen, during my absence from England, concerning the Anthropological Society of London. It seems to me that there rests upon the personal characters of certain Fellows an imputation which has not yet been noticed. Before proceeding further, however, I wish to state that I belong to no clique; a fact which, I think, will be apparent from the pledge given by me at the end of this letter. I allowed myself to be nominated as a member of Council in the summer of this year, upon the representation that the Anthropological and Ethnological Societies were to be united, and that the debt of the former amounted to about £700 (considerably less than one year's income). I had previously served on the Council, but had resigned early in the year 1867. The result of my nomination was, that I was elected a member of Council soon enough to take some part in the discussions upon the proposed union. Three officers of the Anthropological Society (Dr. Hunt, Mr. des Ruffières, and Mr. Brabrook) were appointed to meet three representatives of the Ethnological Society, and at length reported that everything, except the name to be given to the new society, had been arranged to the satisfaction of both sides. Now, the three deputies appointed by the Ethnological Society were Professor Huxley, General Balfour, and Mr. Hyde Clarke. Hence arises a very important question. Did Dr. Hunt, Mr. des Ruffières, and Mr. Brabrook, hoodwink the Council of the Anthropological Society, or did Mr. Hyde Clarke, believing the persons whom he met to be jobbers, puffers, and charlatans, express his willingness to sit at the same council-board with them? This is a dilemma from which Mr. Hyde Clarke's letters to the *Athenæum* leave no escape. Mr. Hyde Clarke denounces the “puffery, jobbery, and charlatanism of the Anthropological Society”; the three Anthropological deputies reported that the three Ethnological deputies, of whom Mr. Hyde Clarke was one, were perfectly willing to ally themselves and their followers with the Anthropological Society, if only they could find a name to their taste. My fellow-councillors and I were assured that there remained no difficulty either of finance or of future management; and that, if the negotiations fell through at all, they could only fall through upon the question of name.

“I shall not trespass on your space by applying any epithets to the person or persons who may have been in fault in this affair; but, should the report of Dr. Hunt, Mr. des Ruffières, and Mr. Brabrook, prove to be correct, I shall, as an independent member of Council, propose another special meeting of the Anthropological Society, for the purpose of expelling Mr. Hyde Clarke; and should that report prove to be false, I shall propose a special meeting for the purpose of expelling Mr. Brabrook, Mr. des Ruffières, and Dr. Hunt himself. Let the issue be clearly understood. I shall, in the one case, propose the expulsion of Mr. Hyde Clarke, not because he has written to the *Athenæum*, or complained of the *Anthropological Review*, or investigated our finances, but because he must have played a doubly treacherous part; firstly, in consenting to give persons whom he believed to be jobbers, puffers, and

charlatans, an equal share with his own friends in the management of a new and very large society; secondly, in turning round, when the negotiations were ended, upon the very persons with whom he had consented to sit at the same council-board, and accusing them of being everything except men of honour and men of science. I shall, in the other case, propose the expulsion of Mr. Brabrook, Mr. des Ruffières, and Dr. Hunt, because they must have committed an unpardonable offence against the Council and against the Society, in deliberately misrepresenting the whole course of the negotiations. It is necessary in the interest of both societies that the real offender or offenders should be discovered. This can easily be done with the assistance of Professor Huxley, General Balfour, and the Council of the Ethnological Society, and I therefore send a copy of this letter to the President and Council of that Society. I send a copy also to Mr. Hyde Clarke, and another to Dr. Hunt, in order that no one may be taken by surprise.

"I am, Sir, your obedient servant,

"To the Editor of the *Athenæum*."

"L. OWEN PIKE.

(Copy.)

"4, St. Martin's Place,

"Sept. 22nd, 1868.

"My dear Mr. Pike,—I have duly received a copy of the letter which you have addressed to the *Athenæum*, of which I am also glad to learn you have sent copies to Professor Huxley and Mr. Hyde Clarke.

"I am very pleased to hear that you propose to bring the subject under the consideration of the Council. Many of the members are still out of England; but I hope to be able to have a meeting early in October. Before then, my official report, as well as that of the Director and Mr. Robert des Ruffières, will be issued to the Fellows of the Society, as both my own and Mr. Brabrook's report is already printed. Mr. Robert des Ruffières has been ill, but I hope his report will also be ready for issue in the official Journal of the Society.

"Dr. Richard King, the founder of the Ethnological Society, is a member of the Councils of both societies, and, I believe he attended the Councils of both societies during these negotiations. You will, perhaps, do well to ask him to attend the next meeting of our Council, which will most likely be held on Wednesday, October 7th, at four o'clock. Believe me, dear Mr. Pike, yours very faithfully,

"JAMES HUNT,

"President of the Anthropological Society of London.

"Luke Owen Pike, Esq., M.A., F.A.S.L., etc."

TO THE EDITOR OF THE ANTHROPOLOGICAL REVIEW.

Sir,—Will you be so kind as to insert a few remarks upon the squabble raised in the bosom of the Anthropological Society, by one or two of its Fellows, if these be not out of place in your valuable publication. I trust that these remarks will lead to the full comprehension of the dispute those readers who have had no opportunity to follow it from the beginning. In May and June, 1867, during the financial crisis, it struck the Council that the Fellows who were in arrears for paying their subscriptions, could not then easily be pressed for paying them; and that until comparatively better times came, it would be imprudent, under the circumstances, to maintain the expenditure of the Society at the rate it was then going on. The Society itself was pretty heavily in arrears with its printer, and it was speedily resolved by the Council to cut down expenses with no sparing hand, and to

clear the Society of its liabilities. The reforms soon told; and the effected savings began immediately to materially decrease the balance against the Society. This was the state of affairs when the annual anniversary general meeting took place in January, 1868. Two or three Fellows, at that meeting, accidentally forgetting, or willingly ignoring, the wise economies then in progress, spoke about the financial position of the Society as if it, instead of daily improving, was unsound and unsatisfactory. Their censure passed rather unnoticed, on account of the general feeling that it was uncalled for. Seven months afterwards the Council, by careful management, had actually reduced the liabilities by more than one half, and brought them to an amount which could no longer appear alarming even to the most timid members. The subscriptions expected to be paid in within a short period, and the assets in the possession of the Society, are quite sufficient to cover the whole debt; and this without speaking of the £1500 or more for which defaulters are still liable to the Society, though not pressed for payment; or the fact that the chief creditor of the Society (the printer) has never pressed, and is at present further than ever from pressing the Society for money.

It was, however, just at this time (August), when the Council more than ever felt the soundness of the Society's financial position, that the same two or three fellows who had spoken at the general meeting, still ignoring the fact of the speedy reduction of the debt, without any warning to the Council, suddenly opened a most regrettable controversy in the *Athenæum* about the *soi-disant* danger of the Society on the question of finances, and attacked the officers and Council in the most ungentlemanly manner, to say the least. Some other motive surely than pure science, must have actuated them. Some shrewd members whisper, that the chief medium of the malcontents is working hard at the board of another society, in order to improve it by all human means, fair or unfair, and attract to it the few timid anthropologists who may be frightened into resigning during the squabble.

Here I conclude; for it is enough to give an *exposé* of the facts, to at once enlist justice on the right side, wherever that may be. I beg to remain, Sir, yours obediently,

F.A.S.L.

September 20th, 1868.

170, South Lambeth Road, S.W.

Sept. 26, 1868.

In the *Athenæum* of to-day, I perceive a letter from a Mr. Hyde Clarke, in which it is stated that "the 'accounts' for 1864, to which your [Mr. Pike's] name appears, reveal a state of affairs which may well induce you to be cautious in impugning the conduct of those who ask an investigation into the real transactions these so-called accounts conceal."

I have hitherto refrained from degrading myself by any controversy with Mr. Hyde Clarke or his supporters; but as the above passage is apparently intended to infer that I was the fabricator of "so-called accounts" designed to "conceal" some "real transactions" which were hid from the Society, I beg to state that these accounts were carefully prepared from the books of the Society by myself, approved by the then treasurer, Dr. R. S. Charnock, and audited by two independent Fellows, Messrs. Beavan and Pike. If Mr. Clarke will illustrate more directly his charges against the accuracy of these accounts, I shall be able more definitely to specify the general imputation of mendacity which I now make respecting him and his writings.

C. CARTER BLAKE.

3, Finsbury Square, London, Sept. 24th, 1868.

A short time ago I heard a distinguished man (an officer of the Ethnological Society) remark that the Anthropological Society was being eaten up by internal dissensions, and that he himself intended to do all in his power to ruin it. I now gather, from recent letters in the *Athenæum*, whence this gentleman derived his information; and I also believe that he will soon discover that his informant, whom I regard as a diseased excrescence on an otherwise healthy and vigorous constitution, will shortly be removed from the body to which he at present belongs, either by a surgical operation, or by frequent applications of caustic.

It is easy also to divine, after what has occurred, why the Ethnological Society wanted to exact other terms than those originally acceded to by its President when the amalgamation scheme was on the *tapis*. When the Ethnological Society's Council awoke to the realisation of the way they have been deceived, what will they say?

The late attacks, however, on the Anthropological Society, so far from injuring it, will, I believe, have an exactly opposite effect.

Unjust and unmanly as these attacks on the Society's finances, etc., are pronounced on all sides, the result of them will only be to attach warm friends still more nearly, and to enlist those who have hitherto been only lukewarm friends into closer union and make them more zealous workers in our cause, and more earnest well-wishers for our success.

H. BEIGEL, M.D.,

Chairman of Finance and Publication Committee
of the Anthropological Society of London.

BOUCHER DE PERTHES.—Another of the Honorary Fellows of the Anthropological Society of London has passed away, in the estimable and amiable Boucher de Perthes, of Abbeville. He was the originator of the modern science of Archaic Anthropology, especially in relation to worked flints.

We learn that there is a probability of Ex-governor Eyre being nominated as the next president of the Anthropological Society of London. We think that no better selection could possibly be made. Mr. Eyre's actual knowledge of the native Australians, and of the mixed-breed population of our West India Islands, is perhaps unsurpassed by any living man; while his well known humanity will do much to remove the erroneous impression in the minds of the ignorant that the Fellows of the Anthropological Society have an antipathy to the lower species of humanity. On this subject, we cannot do better than protest, as we have before done, on the wholesale extermination of the natives of Australia. The following is going the round of the public papers without any protest from our mock humanitarians, whose sympathy seems confined to the full-flavoured negro of West Africa:—

"News from Carpentaria announces the murder of Mr. W. Manson (once inspector of police in Queensland), with a Chinese companion, by the blacks. How the murder was avenged is related by a correspondent of a Brisbane paper as follows:—"I much regret to state that the blacks have become very troublesome about here lately. Within ten miles of this place they speared and cut steaks from the rumps of several horses. As soon as it was known, the native police, under Sub-inspector Uhr, went out and, I am informed, succeeded in shooting upwards of thirty blacks. No sooner was this done than a report came in that Mr. Cannon had been murdered by blacks at Liddle and Hetzer's station, near the Norman. Mr. Uhr went off immediately in that direction, and his success, I hear, was complete. One mob

of fourteen he rounded up; another mob of nine, and a last mob of eight, he succeeded with his troopers in shooting. In the latter lot there was one black, who would not die after receiving eighteen or twenty bullets; but a trooper speedily put an end to his existence by smashing his skull. In the camp of the last lot of blacks Mr. Uhr found a compass belonging to Mr. Manson, of the Norman, and a revolver belonging to a Chinaman. He then followed the tracks of the sheep Manson and the Chinaman had a short time before passed with, and in a water hole found the bodies of poor Manson and the Chinaman cut about and mutilated in the most frightful manner. Cannon's body has also been found. Everybody in the district is delighted with the wholesale slaughter dealt out by the native police, and thank Mr. Uhr for his energy in ridding the district of fifty-nine myalls."

ANTHROPOLOGICAL CONGRESS.—We hear that there is some intention of holding in London or Paris, either next year or in 1870, a general congress of European and American anthropologists. We believe that the step will meet with the approval of the chief anthropological societies of Europe and America. It is not however yet decided whether the congress will be held London or Paris; the congress will, we believe, be presided over in either case by Prof. Broca. Dr. Carter Blake has been nominated general secretary to the organising committee; we shall be able to give further details in our next issue.

BRITISH ASSOCIATION.—Our report of the recent meeting of the British Association must be postponed, as well as our remarks on the papers read at Norwich on Archaic Anthropology, or, as it was there denominated, "Prehistoric Archaeology."

ANTHROPOLOGICAL LABORATORY.—We learn that it is contemplated to establish in London an anthropological laboratory, after the same plan as the one recently established by Prof. Broca in Paris. Students at this laboratory will be instructed in all the different branches of the science of anthropology. We hail the establishment of such a laboratory with much satisfaction, and we shall be glad to do all we can to render it a success.

THE FINANCES OF THE ETHNOLOGICAL SOCIETY.—At the last annual meeting a member of the present Council of the Ethnological Society made some remarks on the financial condition of the Ethnological Society. We believe he was not then a member of the Council of this Society, but now his ambition is gratified he will, if he likes to try, get his eyes opened on this subject. The real facts, we believe, are these:—It was found, during the recent attempt to unite the Ethnological and Anthropological Societies, that, allowing each society nine per cent. of life compounders, that the Ethnological Society has an excess on this head of about twenty per cent. The actual figure we believe to be that in the Ethnological Society there is a debt from life compositions not invested of £240 for every hundred members. This will give the Anthropological Society to have a debt in the then much larger number of Fellows of £1680. The entire liabilities of the Anthropological Society we learn do not amount to £800, and this will probably be all recovered for defaults and stock of books in hand. The nine per cent. of life compositions is invested in furniture, &c., with the Anthropological Society; the result of the whole is that the Anthropological Society is as good as free from debt, while there is a debt of £240 for every hundred members in the Ethnological Society. Could not both societies unite in getting up a fancy bazaar to pay each other's debts or liabilities?

CAPTAIN BURTON does not intend to return to England at present; he is

so much pleased with his South American life that he feels no inclination to relinquish it. We understand that he is now busily engaged annotating the second volume of Waitz's *Anthropology of Primitive Peoples*, the English edition of which has been forwarded to him for that purpose by Mr. J. Fred. Collingwood. Captain Burton's notes cannot fail to add very materially to the value of this elaborate work on the different races of men inhabiting Africa. The Council of the Anthropological Society is, we believe, ready to order it to be printed immediately the MS. returns to England.

RETZIUS.—The English edition of the collected Anthropological writings of Retzius was commenced printing in the autumn of 1866. The financial crisis of that period so much affected the financial condition of the Anthropological Society, that the Council ordered the printing to be stopped. A portion of the work was however at that time printed, and we believe that the Council will be able, with the co-operation of the body of Fellows, to now issue the work without further delay.

MEMOIRS OF THE ANTHROPOLOGICAL SOCIETY.—The third volume of the Memoirs of the Society is now nearly half printed, and will, we believe, be of equal scientific value to the two other important and valuable volumes which have been published in this series.

THE GUATUISO INDIANS OF COSTA RICA.—Much interest has been attracted of late to these Indians, and especially by Dr. Diezmann's present of a skull of a Rio Frio Indian to the Anthropological Society (see p. clxxvii, *Journal of the Society*). The stone implements, also presented by the learned doctor, are undoubtedly of interest; but the method of *emmanchement* to which, I believe, he has not called attention, is still more so. Mr. J. J. Burgess, of the Chontales Mining Company, has now in his possession one of these implements mounted in the natural helve. The wooden handle is coarsely rounded, and the axe is inserted not near the end of the handle, but towards the middle, in such a manner that a large part of the wooden handle extends outward and beyond the implantation of the axe. I have never myself seen such a case of implantation; but Dr. Louis Lartet assures me that similar instances of this most singular *emmanchement* have been observed by him from the Swiss *pfahlbauten*.

C. CARTER BLAKE.

We learn that Mr. Ephraim G. Squier, Hon.F.A.S.L., is now collecting a series of most important observations on the skulls of the Peruvian races, which will be shortly published.

DR. NOTT, Hon.F.A.S.L., is, we are happy to say, engaged in active practice in New York, having left Mobile. He is as staunchly devoted to consistent anthropological opinions as in the days of the publication of *Types of Mankind*; but he regrets extremely that the late war has cut him off from the receipt of many scientific memoirs, which appeared between the years 1861 and 1865.

ANTHROPOLOGY IN CENTRAL AMERICA.—We believe that an attempt was made in March last, by several anthropologists in Central America, to establish a system of co-ordination of observations in anthropology and to obtain reliable statistics on the proportion of the mixed breeds in Nicaragua. A preliminary meeting took place at the Hotel Sirena, Granada de Nicaragua, Dr. C. Carter Blake in the chair, and Colonel Limburg, U.S.A., in the vice-chair. Several Spanish, French, and German gentlemen were present, and the proceedings were carried on in Spanish. Dr. A. Downing, Local Secretary for Granada, promised to place certain skulls and ancient implements derived from ancient Diri graves near Granada at the disposal of the An-

thropological Society of London. It was resolved that a Local Anthropological Society should be founded, to meet in the first week of every month during the dry season, and Colonel Limburg was elected Honorary Secretary, to prepare regulations, etc. The sudden death of the gallant officer from yellow fever, and the departure of Dr. Blake for England, has abruptly terminated, however, the proceedings for the present.

ARCHAIC ANTHROPOLOGY.—We understand that the President and the Director of the Anthropological Society of London have announced their intention of attending the meeting of the International Congress of Archaic Anthropology which is to be held next year, in the beginning of July, at Copenhagen. We understand that Dr. Hunt will afterwards again visit Norway to complete his observations for his paper on the "Physical Characters of the Modern Norwegian". Mr. Brabrook intends, we believe, at the same time to visit the Museums of Christiana and Stockholm.

SIR RODERICK MURCHISON AND PROFESSOR HUXLEY.—We have to express our deep regret if any remarks we made in our last number have given the slightest offence to either Sir Roderick Murchison or Professor Huxley. Some, whose opinions we value, have thought that our remarks on these gentlemen were either sarcastic or "slightly satirical." We can only say in reply, that we were informed that Sir Roderick Murchison had objected to the word anthropology. With regard to our own opinion of Sir Roderick Murchison, it will be found by referring to the first volume of this publication. We have nothing to withdraw from what we then said of Sir Roderick, and we still believe him to be the very best president of any scientific society. We then said, "We heartily coincide with Mr. Crawford's remarks, 'that nature evidently intended Sir Roderick Murchison to be a president. He combined in a most happy proportion firmness and amenity, and always made the meetings over which he presided pleasant and profitable,'" p. 463. We further said, "On the whole, therefore, we have no hesitation in saying that the general result of the meeting must be considered satisfactory to anthropologists. Several circumstances combined to make Section E one of the most popular sections, as indeed it always has been when at all properly conducted. In the first place, the Section was presided over by the prince of presidents, who was a host in himself, and who, we are bound to admit, contributed far more than any other man to make Section E popular, and its proceedings satisfactory. Sir R. Murchison was free from the little-mindedness shown by some of his associates. His whole conduct in the chair was both fair and honest; and all his exertions were used to render the meeting agreeable to all parties. Thus, we know, he frequently felt it his duty to remain at his post to his own serious inconvenience. We can only regret that his other high duties, as one of the chief rulers of the Association, caused him to occasionally absent himself. There was no one at all capable of filling the post like Sir Roderick. It is no disparagement that his two countrymen who acted occasionally in his absence, were far from being so successful in their presidency as their eminent friend." There must, we feel sure, be some mistake or misunderstanding in the report that Sir Roderick objected to the word anthropology—an idle rumour of mischief-makers. In 1863, we know, as a fact, and not as a rumour, that Sir Roderick used these noble words: he "hoped that the science of anthropology, which had been founded by his friends, Blumenbach, Retzius, and Von Baer, would, ere long, be recognised by the scientific world." We do not believe that Sir Roderick would deliberately oppose the science, or even the name for the science, which

was used by these three eminent men. Blumenbach, Retzius, and Von Baer, all used the word anthropology just as it is being used at present by every scientific man in Europe. Every English anthropologist looks with the greatest veneration on all these great men.

With reference to Prof. Huxley we will only say that his present position is a most anomalous and unsatisfactory one. His good name and fair reputation have become for the moment tinged by his apparent connection with the doings of Mr. Hyde Clarke; we feel sure that the recent disgraceful conduct of a member of his Council will be as much condemned by him as we condemn the conduct of one of the members of the Council of the Anthropological Society. Both are equally disgraceful to the societies to which they belong. Our pages have so often borne testimony to the zeal and ability of Prof. Huxley that it is not necessary here to repeat our admiration of them.

With regard to the Ethnological Society we will only here reprint what we said in 1863, and are ever ready to repeat. "We are as much interested in the result of Ethnological science as of general Anthropology. There may be differences of opinions as to the best means of advancing the science of mankind; but we are sure that there is no difference of opinion as to the importance of Ethnology, or the science of races. Nor do we think that any man is worthy of the name of an ethnologist who looks with disfavour on those anthropologists who believe that the science of mankind embraces something more than ethnology; rather ought they to rejoice to see the great success which is attending the labours of their fellow-workers. The British Association is for the advancement of science, perfectly regardless of personal opinions or party cliques; we feel sure, therefore, that it only requires a little time to remove any jealousy that may exist in the breasts of some ethnologists respecting the success attending the labours of anthropologists. Let them learn not to quarrel with the decrees of nature. Astronomy was not arrested in her progress by the clamours of the astrologers; nor will anthropologists cease to develop the extent, magnitude, and importance of their science by the invectives of ethnologists. Rather let them develop their own subject, and look with rejoicing on the beneficent wave which will ere long remove them from their present state of isolation, and raise them to their place as one of the branches of light which will illuminate the great system of organic life."

WE HAVE much pleasure in announcing that the prize of one hundred and fifty guineas offered by the Eisteddfod for the best essay on *The Origin of the English Nation*, has been awarded by the judge, Lord Strangford, to Dr. John Beddoe, Vice-President of the Anthropological Society of London. We heartily congratulate Dr. Beddoe on his success. Dr. Beddoe has long occupied a high place amongst British anthropologists, and we are glad to be able to make public his recent success. We trust this important essay will soon be published. The MS. is the property of the Eisteddfod, but it is somewhat uncertain when they will publish it. It is possible that we may be able to give it to our readers in our own columns.

WE have received from Mr. Luke Burke a letter informing us that he has no present intention of again attempting another issue of his *Ethnological Journal*. He says that we have made him responsible for a third failure. About the same time we received a letter from Mr. Mackenzie, calling our attention to the fact that Mr. Burke's *Ethnological Journal* has already failed on three occasions, and that in our notice we did not mention the issue of

The Quarterly Journal of Ethnology, which took place about 1850. We are really sorry that Mr. Burke cannot be induced to publish his most interesting periodical. We only wish that it were in our power to induce Mr. Burke again to take his pen and enlighten his associates as to the value and influence of race distinction in humanity. We never knew a time when Mr. Burke's services were more needed.

NICARAGUAN ANTHROPOLOGY.—It is to be anticipated that our knowledge of the anthropology of Nicaragua is likely to receive an impulse of importance. Since the return of Dr. Carter Blake, another Fellow of our Society has gone to reside in that country. We allude to Mr. H. G. Williams, late Local Secretary for Ceará, North Brazil, who by this time has probably arrived at the mines, and who has promised to use his best exertions on behalf of anthropological science throughout the Chontales district.

GEORGE E. GLIDDON.—Mr. Kenneth E. H. Mackenzie is far advanced in his completion of a fitting memoir of the late George E. Gliddon, the enthusiastic egyptologist and anthropologist, assisted by Mrs. Gliddon. An important and interesting series of letters illustrative of the literary history of *Types of Mankind and Indigenous Races of the Earth*, addressed to Dr. J. Barnard Davis, V.P.A.S.L., F.S.A., will be given by that gentleman's kind permission. Mr. Mackenzie desires us to announce that he will be greatly indebted for any addition to his materials.

A CAVE STORY.—A correspondent of a paper in New York professes to have discovered a magnificent artificial cavern in the Hudson palisades. The description is ornate, and omits no details which could add to the interest (or improbability) of the story of discovery. The cave is said to be fully one mile in length and at least half a mile wide, with a vaulted roof, higher than that of Trinity Church, supported by innumerable pillars, which must have been erected by the hand of man many centuries since, and furnished with innumerable side recesses, ante-chambers, and long winding passages of the most wonderful construction. Ruins, thousands of years old, are found, together with the mouldering bones of beings of enormous stature, "as belonging to a race of giants that formerly inhabited the earth." The floors are as smooth and hard as granite, though covered deep with the dust of centuries. Here and there a lower deep is discernible through the all-pervading gloom, with spacious stone steps leading thereto. From these mysterious cavities the sound of rushing waters falls upon the ear, with other reverberations of a strange, unearthly character. Cabalistic signs cover the bases of some of the pillars, while figures bearing a close resemblance to sphynxes, deaths' heads and mummies, as if of Egyptian design, adorn various portions of the walls and roof. The famous Sun hoax was constructed with a little more plausibility.

AMERICAN PRE-HISTORIC REMAINS.—Researches are being made among the pre-historic remains in the Mississippi Valley, one object of which is to make a full collection of ancient art, representing the archaeology of the northern division of the western continent. The mounds on the American Bottom, in Illinois, are comprised in two groups constituting a single grand system. The number of them, including those on the American Bluff, is nearly two hundred, of various shapes and sizes, some being hardly raised above the general level, and others rising to a height of ninety feet. They are entirely composed of earth, and constructed with perfect regularity. It is beyond doubt that every mound was elevated by human labour, and it is thought that these tumuli were all erected by the same people. Mr. De

Haas writes to a western paper describing some of the remains found in these mounds. There are, it seems, two kinds of pottery found there; one is fine, compact, close-grained, kiln-burned, painted, and tastefully ornamented, and proves much skill. The other is coarse, rude, of irregular thickness, sun-dried, ornamentative without taste; and some of the finer quality occasionally shows a polishing or glazing, leaving minute striae, as if done with a tuft of grass dipped into a *barbottle*. In making some excavations on the plain, a short distance west of the large mound, Mr. De Haas discovered large quantities of pottery in connection with human remains. Some of them were rude and quite heavy. One was clearly a cinerary urn. The stone weapons, implements, and ornaments indicate two classes, one represents the palæolithic, or undressed stone age; the other the neolithic, or polished stone age, of Sir John Lubbock. Some of the specimens of the finer quality are described as of exquisite skill and workmanship, and are of porphyry, hornblende, granite, serpentine, nephrite, and the hardest varieties of amphibolic rock. Agricultural implements have been found in these mounds, unlike anything of the kind discovered elsewhere. The hoe of the mound builders is said to be but little inferior to that of our own generation of patent agricultural tools. The small quartz weapons of this ancient people are very fine; ranging from the common horn stone up through all the varieties to the purest calcedony. The celts or axes are of almost every style and finish, some being very large, weighing over ten pounds. A gigantic implement far surpasses these in size, some weighing over twenty-five pounds. The use of the latter was probably to dress hides or crush corn. Mortars and pestles have been recovered, as well as pipes, discs and porphyritic rings for games. According to the discoverer above referred to, "the ornaments with which this unknown race decorated their persons, the weapons with which they fought, the implements with which they slew their game, and the vessels with which their domestic board was served with viands, have all been recovered, with a large number of miscellaneous articles in stone, which constitute, with those from other antiquarian locations, one of the most extensive and valuable collections of early American art yet made."

SICILY.—In Sicily, on one of the plateaux of the Cassaro mountain, ruins have been discovered which indicate the existence of a great city, whose origin dates from the period when a colony of Syracusans established themselves in this spot. According to the historians, this city can be no other than the ancient Ciasatro. The walls have a development of 2,154 yards, and are 9 ft. 10 in. thick; the materials are stratified marly limestone, well chiselled. The entire circumference of the town is about 6,400 yards. It was divided into many quarters, and in the eastern portion the ruins of a temple are visible. Not far from this city there exists another locality called Castro-Novo, of very ancient origin.

To the Editor of the Anthropological Review.

KITCHEN-MIDDEN IN BRITTANY, AT DOËLAN. SIR,—Perhaps the following notes concerning an apparently abnormal kitchen midden on the Coast of Finistère may interest some of your readers:—

In the summer of 1866, while staying at the little fishing village of Doëlan, on the coast of Finistère, Mr. Peyron and myself were struck with an artificial-looking, grass-covered, mound situated on a little headland named Bec-au-tuch, which forms the northern side of the creek of Doëlan. We accordingly set to work opening it, an operation which was greatly facilitated

by an excavation in one side of the mound, which was being made by the peasants of the neighbourhood for the sake of loose flat stones with which to repair their dykes or walls.

The mound in question stands as a small irregular boss on the bare rock (consisting here of metamorphic schists). The greatest height, about the centre, did not exceed six feet. The upper part of the hillock was covered by a thin layer of soil; immediately below this came the true kitchen-midden, consisting of a layer, between three and four feet thick, of the shells of edible molluscs: these were, the common limpet, the periwinkle, and the cockle, all three in abundance, a few oysters (not found here at the present time, although common a few miles north), and a few débris of ormers. All these shells were white, and readily crumbled to pieces.

This heap of shells rested upon a very rudely-arranged layer of flattish flakes of stone (mica-schist), say three inches or so in thickness, below which not a shell was to be seen. The space intervening between this covering of stones and the rocky base of the knoll was filled with a black animal mould containing a large number of bones. These bones were well seen *in situ*, but crumbled into dust as soon as they were removed; many were human, but the greater number, although not determined, evidently belong to small mammalia, such as the dog or fox, etc. . . . After a good deal of grubbing in this bone-bearing black mould, Mr. Peyron disclosed to view an almost perfect human skull; upon attempting to extract it from the soft matrix, however, it fell into dust like the rest of the bones, with the exception of a considerable portion of the maxilla and some teeth—four, I think. These, with such of the other bones as we managed to preserve, are now in the possession of the "Société Polymathique du Morbihan," and are, I presume, in their museum at Vannes.

I need not point out that the interest connected with this mound lies in the curious, and to me, new fact of the superposition of a true kitchen-midden of the ordinary type on an older and covered (however rudely it was still covered) heap of animal remains of a totally different character. Not a single bone being found in the shelly portion, and no shell in the black earth or bony part.

To my mind, notwithstanding the accompanying foreign animal remains, it seems clear that the lower portion containing the skull and the human bones is an old burial place or small tumulus; and not, as might, perhaps, be suggested, an older kitchen-midden belonging to people addicted to cannibalism. The covering of flat stones of itself seems enough to show that some kind of respect or awe was attached to the contents of the heap, and that it was not a mere pile of refuse.

No marks of any sort were observed on any of the bones; but I do not attach any importance to this, as the state of the remains was such that, had there been any, they might very easily have been overlooked. No implements, nor, indeed, any signs of human workmanship were found.

If a tumulus, it is extraordinary that later people should have chosen it as a convenient surface on which to make a kitchen-midden. If, on the other hand, it be a mere refuse heap, the layer of stones with which it is covered is very difficult to account for.

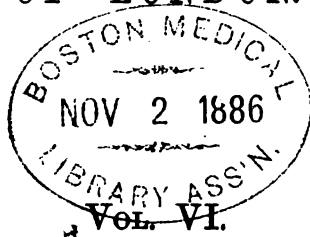
I must leave it to more competent judges to decide this question, and will be happy to give any information in my power on the subject.

G. A. LEBOUR, F.R.G.S., etc.,

Of the Geological Survey of England and Wales.

Chollerford, Hexham, 18th September. 1868.

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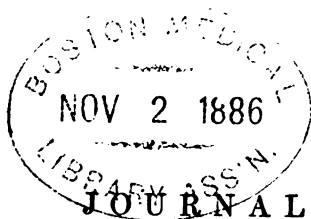
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OF THE
ANTHROPOLOGICAL SOCIETY OF LONDON.

NOVEMBER 5TH, 1867.

DR. B. SEEMANN, V.P., IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

THE following numerous presents were announced to have been received :—

FOR THE LIBRARY.

FROM R. TATE, Esq., F.G.S., Belfast Naturalists' Field Club (4th report).

FROM DR. J. BARNARD DAVIS, F.S.A., V.P.A.S.L.—Weisbach, Die Becken österreichischer Volker ; Dr. B. Davis (portrait of).

FROM THE AUTHOR—W. Ridley, Languages spoken by Australian Aborigines.

FROM THE ACADEMY—Bulletin, Académie Imperiale de St. Petersburg ; Giornale de la Società Naturale de Palermo.

FROM THE SOCIETY—Proceedings of the Anthropological Society of Moscow.

FROM K. R. H. MACKENZIE, Esq., F.S.A.—Henri Brugsch, Mémoire sur la Reproduction imprimée des caractères Demotiques ; Anonymous, The Northern Light.

FROM THE AUTHOR—Giovanni Canestrini, Origine dell' uomo.

FROM THE AUTHOR—Carl Vogt, Mémoire sur les Microcephales.

FROM T. BENDYSHE, Esq., M.A., V.P.A.S.L.—Origen contra Celsus (MS. translation).

FROM JAMES GOWANS, Esq.—Spurzheim, Defence of his Doctrines ; Threlkeld, an Australian Grammar.

FROM THE AUTHOR—Paolo Gaddi ; Intorno al cranio di Dante Alighieri ; Cranio ed encefalo di un idiota ; Dimostrazione Anatomica della mano dell' uomo con quella delle scimie.

VOL. VI.

- From JOHN STIRLING, Esq.—Dr. R. Jamieson, *Mind and Body*.
- From the SMITHSONIAN INSTITUTION—Smithsonian Institution, *Annual Report of Secretary of War* ; R. Pumpelly, *Geological Researches in China, &c.* ; C. Whittlesey, *On the Freshwater Glacial Drift*.
- From the INSTITUTE—Proceedings of the Essex Institute ; *Memoirs of the Boston Society of Natural History* ; *Smithsonian Miscellaneous Collection*, Vols. VI and VII.
- From the SOCIETY—American Antiquarian Society, *Proceedings* (complete set).
- From GEORGE HARRIS, Esq., F.S.A.—Spencer, *History of Philosophy*.
- From the SOCIETY—Asiatic Society of Bengal, *Journal of the Asiatic Society of Bengal*, Part I, No. 4 ; *New Series*, 1866, Part I, No. 1 ; *New Series*, 1867, Part II, No. 1 ; 1867, No. 139
- From the INSTITUTION—United Service Institution, *Journal of the United Service Institution*, No. 44.
- From the SOCIETY—Moscow Anthropological Society, *Materials for Anthropology during the Tumular period in the Government of Moscow*. Moscow, 1867, Part I, Vol. 4.
- From the EDITOR—The Farmer's Journal and Agricultural Magazine, July, August, September, October, 1867.
- From the SOCIETY—Schriften der Königlischen Physikalisch, Okonomischen Gesellschaft zu Königsberg, 1865 and 1866.
- From the EDITOR—Hermann Burmeister M.D., *Anales del Museo Publico de Buenos Aires* (Second part).
- From the SOCIETY—Proceedings of the Society of Antiquaries of Scotland, Vol. VI, Part I, and Appendix.
- From WALTER DENDY, Esq.—Anonymous, *Wonders of the Human Body* ; W. Dendy, *Sketches of Egyptian Mummies*.
- From the EDITOR—Medical Press and Circular, September, October, November, 1867
- From Professor MAX MÜLLER—Professor Max Müller, *La Science du Langage* (translated by Georges Harris and Georges Perrot ; Henry J. A. Pratt, M.D., *Genealogy of Creation* ; Mäta Coomāra Svāmī (translator), *Arichandra the Martyr of Truth* ; Reginald Stuart Poole, F.R.S.L., *The Genesis of the Earth and of Man* ; J. Barthélemy Saint-Hilaire, *Du Bouddhisme* ; Friedrich Diez (translated by C. B. Cayley, B.A.), *Introduction to the Grammar of the Romance Languages* ; Anonymous, *Correspondence relating to the Establishment of an Oriental College in London* ; Max Müller, M.A., *Proposals for a Missionary Alphabet* ; Anonymous, *Proposals for a Missionary Alphabet* ; Dr. Daniell Wilson, *Prehistoric Man*, 2 vols. ; Hon. Mountstuart Elphinstone, *The History of India*, 2 vols.
- From the AUTHOR—Pierre Béron, *La Terre et l'Homme avant et après le Déluge*.

- From the SOCIETY—Proceedings of the Royal Society, No. 95, Vol. 16.
- From the ACADEMY—Bulletin de l'Académie des Sciences de St. Petersbourg, Vol. 11, No. III and IV; Vol. 12, No. I.
- From the ACADEMY—Académie Royale de Belgique des Sciences, des Lettres, et des Beaux Arts; Memoirs, Vol. 36; Bulletins, Vol. 23; Annuaire, 1867.
- From J. FRASER, Esq.—Anonymous, History of John Knox; J. A. Froude, Influence of the Reformation on the Scottish Character; Baron Von Feuchtersleben, Principles of Medical Psychology; Edward Nares, D.D., Man, Theologically and Geologically.
- From the AUTHOR—Dr. Hyde Clarke, Address on Geological Surveys.
- From Dr. HYDE CLARKE—A. Ubicini, La Turquie Actuelle; J. R. Morrell, Turkey Past and Present; Nassif Mollouf, Précis de l'Histoire Ottomane; Dr. Hyde Clarke, Help to Memory in Learning Turkish; Quarterly, The Quarterly Levant (January and April, 1861); Society, Transactions Royal Society of Northern Antiquaries, Copenhagen.

FOR THE MUSEUM.

- From Dr. ANT. FRITSCH—seven Bohemian Skulls.
- From the Rev. H. CALLAWAY Loc. Sec., A.S.L.—Three Kaffir Skulls, Boxes, Spoons, Combs, Snuff-boxes, Snuff-spoon, various Calabashes.
- From WM. THEOBALD, Esq. Loc. Sec. A.S.L. for Rangoon, — Four Birman Skulls.
- From J. MEYER HARRIS, Esq.—Eight Negro Skulls.

The CHAIRMAN announced that twenty-seven new members had been proposed for admission into the Society, and would be elected at the next meeting of the Council; it was evident, therefore, that they were making progress.

The following Report was then read:—

Report on Anthropology at the British Association, 1867. By C. W. DEVIS, B.A., F.A.S.L., Vice President of the Manchester Anthropological Society.

IN laying before the Anthropological Society of London a report upon the reception given to anthropology at Dundee by the British Association and the people of Scotland, and upon the prospective relations which it has obtained with both those bodies, it is a pleasure to be able to state that the position of the science is in these respects, as in others, entirely satisfactory. It had been apprehended that the British Association would not on this occasion renew the welcome which it extended to anthropology as a specific science at its previous

meeting. The expectation was unfortunately realised, unfortunately for the opponents of anthropology; to its friends one permanent cause of regret alone remains,—the anticipation rendered some eminent anthropologists unwilling to incur the trouble of a journey necessarily long, possibly vain. To the anthropologists whose lot it was to take part in the contest forced upon them the early days of the meeting were full of anxiety and difficulty; annoyance was created among them only as a consequence of the means which they had reason to believe had been adopted for the humiliation of their science. Those means were at the outset eminently successful in placing the official representative of the Anthropological Society of London, Dr. Hunt, in a very embarrassing position. As a member of the committee of Section D to which our science was affiliated at Nottingham, Dr. Hunt might have proposed the formation of a department for the Science of Man under its accepted designation; and, according to a letter which the Rev. H. B. Tristram thought fit to write to the local papers, not only were the authorities of the Association dutifully prepared to receive such a proposal, but accommodation for an anthropological department had been actually provided. Notwithstanding this happy conjugation of the active and passive moods, Dr. Hunt did *not* propose a separate department for anthropology, and for the reasons explained by him in his inaugural address to the Conference. This conjunction of unfavourable circumstances placed insuperable difficulties in the way of anthropology. Even its honest enemies would have been well content to see it undertake a department with the materials mercifully spared to it. The result would have been disastrous alike to its scientific reputation and to its public import. To allow itself to drift unrecognised into the section, and be picked asunder as a scientific waif, would have been to sacrifice the labours of years, and confess that the science of man had neither the unity of purpose nor the consistency of action necessary to constitute a special branch of inquiry. Dr. Hunt had but one other course before him;—to save the credit of anthropology by retaining possession of the papers, and thereby expose himself to the odium, quickly and triumphantly laid upon him, of withdrawing the science from the only section to which it could properly belong. Characteristically, he chose this alternative, and so doing increased his claims to the gratitude of anthropologists. The Local Committee for the reception of Anthropologists, to whom, as the exponents of the friendly feeling of Dundee, the isolation of our science was first announced, received the information with emphatic indignation. At a general meeting of anthropologists, subsequently held, there was entire unanimity in the opinion that they would be wanting, both to themselves and to the common interests of science, if they allowed the non-appointment of their department to pass without an earnest protest. Such a result would have been impossible in any scientific gathering abroad, and British anthropology could not permit itself to be tacitly disgraced in the eyes of its illustrious *confrères*. In simple justice to the Association, which had become unwittingly implicated in a questionable procedure, it was considered that an appeal ought to be made to its broader judg-

ment. An Anthropological Conference was at once decided upon, with the further purpose of enabling the papers to be read, and of thus showing to all whom it might concern that anthropology could, if necessitated, stand alone. The presidency of the conference was accepted by Dr. Hunt; the general arrangements were confided to the Local Committee, to whose zeal and ability at this juncture our science remains largely indebted. The inaugural meeting was held in the Union Hall, Dundee, on Friday, September 6th, the number and character of the audience attesting a wide-spread desire to compare anthropology's account of itself with that which had been so angrily presented to the public by its assailants. In opening the proceedings of the Conference, the President drew the attention of the Association and the public to the aim and method of anthropological science; a full report of the address will be published in the next number of the *Anthropological Review*.

The first meeting of the Conference was productive of the happiest consequences. A very marked change took place in the attitude assumed towards anthropology both within and without the Association. Eminent members of that body immediately confessed that they had previously mistaken the objects and underrated the value of the science. Disapprobation was freely expressed against the feeling which seemed to have instigated its obstructives. Even that portion of the public which still professed hostility, exclaimed that the Association had been placed in a false and untenable position. Whether from this pressure or from other causes, there loomed in the future a prospect of re-entrance into the Association on favourable terms. Anthropology was on its part quite ready to relinquish its vantage ground, on an assurance being given that it would not on future occasions be unnecessarily impeded. It was eventually arranged that at the next meeting of the Association it should have a place in the Association, and that during the current meeting any papers it might be disposed to read should be taken in section E. This recognition of the claims of anthropology once more striven for and won, rendered the discontinuance of the Conference imperative. The general secretaries were therefore requested to draw up an address in explanation of the circumstances attending its dissolution. The following was issued:—

TO THE MEMBERS OF THE DUNDEE ANTHROPOLOGICAL CONFERENCE.

GENTLEMEN,—Before coming to Dundee, we feared that a section of the governing body of the British Association would prevent the introduction of Papers on Anthropology in a distinct department. The non-appointment of an anthropological department in the same manner as last year, together with a report of opinions expressed by some of the officers of section D, assisted to increase this fear. It was under the impression that anthropological science was not being encouraged by some of the authorities that you were called together. Since then, explanations have been made, which show that there has been considerable misunderstanding in the matter, although we are still under the impression that Dr. Hunt was not informed of those

details of intended arrangements to which we consider he was fairly entitled. We are now glad to be able to announce that such explanations have been received as have in a great part removed these suspicions. We are most happy also to be able to state that the enthusiasm and earnestness which were shown by all who took part at the first meeting of the Conference, together with the explanations then made, have produced so favourable an effect, and so much changed the position of anthropologists in the British Association as to leave nothing more to be desired. Arrangements are about to be made by which anthropologists, ethnologists, and geographers will be all united in one section. Should it be necessary at any future time to create a separate department for any one of these sciences, the proposed arrangement would render such change possible, and remove the anomalies which have hitherto existed in the Association. It has been, therefore, decided that the Conference be dissolved, and that the papers announced to be read there be handed over to the British Association. The money received for the sale of tickets will be at once returned. We are fully conscious that the discontinuance of the Conference will cause you much regret; but we trust that the position so long contended for, and now recognised, will compensate for any disappointment you will experience. The Fellows of the London and Manchester Anthropological Societies at present in Dundee beg, through us, warmly to thank all those who have sympathised with their difficulties, and who have thus brought about the desired recognition. The arrangements contemplated for the future will, we believe, be such as finally and satisfactorily to settle a most difficult question, and at the same time unite all students of these allied sciences.—We have the honour to be, gentlemen, your most obedient servants,

JOHN PLANT,

C. W. DEVIS,

General Secretaries, on behalf of the Officers and Executive
Committee to the Dundee Anthropological Conference.

Dundee, 7th Sept., 1867.

During the remainder of the meeting, anthropologists continued to feel content with the provisions held by them for their future incorporation into the Association, but their satisfaction was somewhat modified by circumstances which deprived them of the immediate benefits proposed. With a single exception, none of the papers intended to have been read found their way into section E. Of the difficulties raised, one at least was valid—the section had not time to do justice to its own papers. A captious observer might perhaps have said that even this difficulty was not altogether a necessary one, some of the papers read at the expense of others passed over being old friends to science, though possibly new to Dundee. The plethora of section E shows the absolute necessity of a separate department for a science so rich in materials for discussion as anthropology. To superadd the rest of its branches as well as ethnology to a geographical section would clearly be as impracticable as absurd. Anthropology must either be conducted apart from geography or

ignored altogether ; which of these issues is to become final now rests with its students ; if they be true to themselves, they will in future be received into the Association in a respectful, if not a cordial, spirit ; otherwise, a renewed display of the inveterate hostility banded against them will be encouraged, almost justified.

Though the anthropologists who crossed the border, and their fellow-labourers in Scotland, would have much preferred to enjoy the advantages of collective and definite study, their forced inaction was not altogether profitless : it gave them one more opportunity of observing, and to some extent participating in, the incoherent mode of cultivating man's natural history provided by the Association. Several anthropological subjects of considerable interest were introduced in various sections.

A very valuable accession to archaic anthropology was received from a communication by Mr. Pengelly to the geological section, in which were detailed the results of recent explorations in Kent's cave. He produced a fine series of human relics, including portions of the skeleton, and a variety of implements found associated with the remains of the great carnivora and mammoth. The most highly-finished tools were at the lowest levels. The section received the evidence that in the south of England man was contemporary with the extinct mammals as conclusive, the geological and archæological facts being unmistakably concurrent. In the anatomical department of section D a paper was read, on the "Phenomena of Life and Mind," by Mr. Dunn, who upheld the old distinction between the psychical and the physical forces, admitting, however, that "we know nothing of life apart from organisation, and have no evidence of mind independent of a brain and nervous system. The agency of matter and the physical forces are as essential to the manifestations of life as life itself is to the display of intelligence." In another paper, on "Life, its Nature, Origin, etc.," by Mr. P. Melville, the theory of the Scotch school on the "vital form or soul" was set forth in opposition to the so-called materialism of Spencer. The author entered at length into the cause of the difference between man and animals, rejecting Professor Huxley's anatomical explanation of the acquirement of speech. After combating the development theory, he concluded that "all facts seem to confirm the opinion that species are never transmuted. They have a definite nature or vital form—call it occult—but you cannot evade it, and Professor Lister may yet prove that 'spontaneous generation' is but the embodiment of vital forms infused in the atmosphere." In the course of the discussion which followed, Dr. Hunt expressed his opinion that the author of the paper had spoken of Professor Huxley under considerable misapprehension of his views.

In Section E a paper was read, by Sir John Lubbock, on the "Early Condition of Man," forming a valuable summary of the arguments in favour of man's primitive barbarism deduced from his present condition. After referring to the diversity of the opinions entertained on this subject, the author proceeded to combat the assertion of Dr. Whately, "that we have no reason to believe that any

community ever did or ever can emerge unassisted by external helps from a state of utter barbarism into anything that can be called civilisation." No instance of this is on record, because Dr. Whately's definition of a savage implies the impossibility of the means of record, and, from the nature of things, the kind of evidence in other respects demanded cannot be adduced. Some savages, as the Australians, have not civilised themselves, because their peculiar circumstances did not permit them to do so. President Smith thought that if man were created a helpless savage, he must have perished before he could have acquired the means of sustaining himself. Exactly the same might be said of the gorilla. There is no evidence for, and much against, the idea that savage man is in a state of degeneration. Many of the simpler domestic arts and religious ideas, which, once possessed, could scarcely be lost, are not universal. Having disposed of the arguments of Whately and his followers, the author showed that there are indications of progress even among savages, and, among the most civilised nations, there are traces of original barbarism. The well-known opinion of Haliburton that the universality of certain beliefs and habits, which are apparently arbitrary, proves their community of origin, was contested, though similarity of custom was considered to prove the original identity of the human mind, and to be therefore an argument for the unity of the human race, which, however, was not necessarily descended from a single pair.

The last day of Section E was rendered remarkable by an announcement, which it was the lot of Sir Roderick Murchison to make, and which will be received by anthropologists with much gratification. The decision of the International Congress to hold its next meeting in this country, which formed the subject of Sir Roderick's communication, cannot fail to have an important influence upon the future of British anthropology. If the Congress be supported, as it will doubtless be, with the zeal with which our science has hitherto been cultivated, it will at once substantiate the claims of anthropology to the respect of men of science generally, and, what is still more desirable, largely increase the materials upon which sound views of archaic humanity can alone be founded. On taking the chair, Sir Roderick said—"I stated yesterday, in speaking shortly on Sir John Lubbock's paper, that those gentlemen who had formed themselves into a Congress for the advancement of all knowledge respecting the pre-historic condition of man, as demonstrated by the implements of art which man must have used being found in association with extinct animals—a subject which has been worked out to a great extent on the Continent, and to some extent in our own country—intended to hold the next meeting of the Congress devoted to that subject in Great Britain in 1868. Before I proceed to say a few words about the progress already made by this institution, and by the several distinguished men who have occupied themselves in these researches, I will read to you a letter which I received the day before yesterday, from the President of this foreign Congress, M. Lartet, a most eminent comparative anatomist, and one well-known to every man of science who occupies himself with natural history. He has a Euro-

pean reputation, and he is now the President of the Pre-Historic Congress of France. M. Lartet thus writes:—‘I have the honour to inform you that in the meeting of the 29th August last, the International Congress of Anthropology and Pre-Historic Archaeology, holding its session at Paris for the year 1867, adopted the proposition of holding its next session in England in the year 1868. At the same meeting the members of the Congress resolved to offer to you the Presidency of this session in 1868, and to associate with you the names of Sir Charles Lyell, Sir John Lubbock, Messrs. J. Evans, A. Franks, J. Prestwich, G. Busk, Carter Blake, etc., in order to form the nucleus of a committee of organisation, which is to be charged with determining the place of meeting of the Congress, and to regulate the conditions under which its sittings are to be held. All the documents relating to the foundation of this Congress at La Spezzia in 1865, to the next session at Neuchatel in 1866, and to its session in Paris in 1867, will be sent to you.’ The first thing I did on receiving this letter was to write immediately to M. Lartet, and to tell him that I was not the person by any means entitled to preside over a Congress of this nature. I immediately adverted to Sir Charles Lyell, to Sir John Lubbock, and to those other distinguished men who have written books upon the subject, whose books have circulated through the land, and who have given up a very large portion of their time to the consideration of this important subject, whereas I, who am a simple geologist, and I hope something of a geographer also, have always been occupied in developing the condition of the earliest animals that are found in the crust of the globe, and therefore I have been working at the other end of the geological scale, while these pre-historic inquirers are working at the very highest and last epoch in any way connected with geological science. Consequently, I do not feel that I would be the fittest man to occupy the presidential chair, though I have a hearty wish to promote this inquiry, because it is only by an inquiry into facts, not in our own country only, for in our own country man was in a barbarous state when other countries were having a high civilisation, but by a general inquiry, extended to all parts of the world, that we can arrive at proper and sound inference on this important subject. The announcement which I have now made has no direct connection with the business of the British Association—it is simply an announcement of a Congress which has the most intimate relations with that great subject on which Sir John Lubbock addressed you yesterday; and I make it here so that it may receive as much publicity as possible, in order that those foreign gentlemen may be sure of a proper welcome in this country when they come here.”

In turning to the subject of the status acquired by anthropology among the people of Scotland, reference must first be made to the extraordinary public interest which awaited its advent. Curiosity, well and ill-disposed, was greatly excited. The unfortunate circumstances which led to the rupture of the previous relations of the science to the British Association were instantly made the subject of general comment. Those who are acquainted with the prevailing tone

given to Scotch opinion might expect that the separation of anthropology from the Association would have been welcomed with something akin to exultation. So far from this, conduct, which appeared attributable either to caprice or compliance, was blamed on all sides. The fact that anthropology was unwillingly and unnecessarily outside the pale of the Association at Dundee, whether by overt exclusion or covert prevention, was at once contrasted by the public with its acceptance at Nottingham, where its proceedings obtained scientific approval. The first cheering sign which met the southern anthropologist was that the intolerance attributed to the Scot is insufficient to allow him to tolerate unfairness. Though the reflections cast upon the Association were no doubt in some respects undeserved, it cannot be denied that they were apparently justified by the circumstances under which the meeting at Dundee took place. The public mind at once concluded that the Association had discarded anthropology from a prudent resolve to stand well with their Scotch hosts. Various speakers in the sections took opportunities of declaring, on behalf of the Association at large, that elsewhere scientific statements had never been rejected on account of their tendency. These disclaimers did not, however, appear to remove the impression that the Dundee meeting was in this respect exceptional. For a twelvemonth past it had been well known in the south that sectarian prejudice was being bitterly aroused by certain zealots against the latitudinarianism of science in general and anthropology in particular, and there were sufficient indications given that on Scotch soil the effect of scientific induction on theological doctrine would be watched with jealous reserve—a conflict between the two with positive hostility. If general opinion were correct in believing that this foreknowledge had influence over the minds of any members of the Association as they journeyed northward—if those members really were persuaded that the public favour, and even the presidential smile, would be jeopardised by a scientific licence reputable in lower latitudes—if they were conscious that science generally sins against popular orthodoxy, and that on this occasion anthropology would be a convenient scape-goat to be sent into the wilderness—if feeling so unworthy the dignity of science could possibly be supposed to actuate them—they were rudely undeceived by finding that they had perverted a crime into a blunder. Scotch candour refused the victim offered to its austerity. No anthropologist could have devised a more thorough preparation for the introduction of his science into Scotland than has been given by its enemies, scientific and priestly. Scotchmen saw it, or believed they saw it, put aside by the Association on their account, and their sympathies went with it. They heard it appeal without reserve to their common sense and liberality, and felt how hugely it had been misrepresented by well-meaning friends; how deeply maligned by ignorant or unscrupulous enemies. Above all, the Scot has had abundant opportunities of testing the worthlessness of their judgment who rave about the unscientific nature of anthropology. He has been shown that it has all the elements and obeys all the laws of a true science, and, if true, then the noblest of all. Anthropology is engaging Scotch attention

at a juncture no less favourable to its establishment than the circumstances which heralded it. To any one who reads the signs of the times, the Scotch mind appears in a transition state. The imperceptible approach of the wave of modern education is gradually undermining the old landmarks of bigotry, and the practice of the Puritan is becoming irksome. Public intelligence is growing uneasy in swaddling clothes unsuited to its larger growth, and the mind of Knox is no longer supreme. The most authentic evidence we could have of this we gather from the indignant remonstrances of Scotchmen against the English notion that free thought is tabooed to them. A gentleman, for example, gives a Christian Young Men's Association his ideas of the British Association, and, while lecturing the young men, falls a scolding anthropologists thus: "Funniest of all was the absurdity of the anthropologists as they made vain efforts to get the glory of martyrdom, and made a false fuss over the narrowness of the Scotch. They seem to fancy that we are such a set of miserable bigots as to be unable to listen to anything that does not square with our own theories. It would be wrong in me not to state, however, that several of these papers open up strange and new fields of inquiry, and I would say to young men inquire, read, do not be dogmatic." Reminding the lecturer, in passing, that it was not the anthropologists, but their opponents, who are supposed to have taken the good people of Dundee for "miserable bigots," we accept his testimony, in conjunction with that of others, that the Scotch mind is disposed to free inquiry, and is weaning itself from dogmatism. We accept it the more willingly, because we see in it the best grounds of hope that Scotch anthropology will take root and flourish, for it is to the science of humanity that the eye will be directed as the fading outlines of dogmatic teaching sink more and more below the horizon. There is, indeed, reason to think that the reputation for narrow views which Scotland undoubtedly has, is, in respect to its educated classes, in a great measure factitious. Scotch orthodoxy is very loud in its self-assertion, as well as very relentless towards offending railway directors and journeymen printers, but in its denunciations we listen not so much to the voice of public opinion as to the thunders of a northern Sinai. The fanaticism of the priesthood becomes the opprobrium of the people. The nation is too tightly held in the ecclesiastical embrace for the liberality inseparable from intellectual power to relieve itself without a struggle; and though the natural acumen of the Scot cannot avoid recognising the discordance between the modes of thought required by his spiritual regimen and those necessitated by scientific culture, his characteristic prudence deprecates a collision with his hierarchy, and he seldom exercises the perilous right of speaking for himself. This state of things cannot last long. The Scotch mind is eminently adapted to scientific inquiry, an education incompatible with intellectual feudalism. No country of equal extent has produced a greater number of patient workers and illustrious discoverers—men whose genius has illuminated every department of knowledge—men who have not hesitated to seize the truth wherever they found it, irrespective of prejudices, whether their own or their neighbours'. Common experience

shows the strong tendency towards scientific activity amongst educated Scotchmen. This only requires to be duly attracted towards anthropology for it to receive from them the attention and respect which it deserves. Thanks to its ill-wishers, that attraction has taken place so far as it could be effected by their clamours. Sounder and more abundant results will follow as soon as Scotchmen see that their enterprise abroad can supply many of the wants most sensibly felt in the science of man, and that their own country is peculiarly rich in subjects of anthropological investigation. A society for the study of anthropology has already been formed by the friends who fought so spiritedly by our side at Dundee, and every lover of the science will rejoice if the favourable anticipations of the prosecution of anthropological science in Scotland, derived from experience of the late meeting, be furthered in its fulfilment by the labours of this youngest colleague of our society.

Thanks were unanimously given to the writer of the Report.

Dr. HUNT explained the reasons why he did not propose formally that there should be a separate department for anthropology at the meeting of the British Association, and why it was thought proper that Mr. Devis should write the report of what occurred, as an independent member of the Society. There had been in former years a long struggle to get anthropology recognised at the meetings of the Association. At Nottingham an arrangement was entered into, under the influence of Professor Huxley, by which anthropology was separately recognised as a department of biology, though it was not an arrangement with which he (Dr. Hunt) was satisfied, and he declared at the time that the separation of anthropology from ethnology into two distinct departments would only be temporary. The result was that several of the papers read were identical, and same subjects were discussed in different sections at the same time. The report which had been read would explain why that arrangement, which he had considered temporary, had not been continued; and, thanks to those gentlemen who were on the Local Reception Committee of Anthropologists at Dundee, the science of man would occupy a much more favourable position at subsequent meetings of the British Association. But for them, he believed, anthropology would have been very differently received. The magistrates and a great portion of the people of Dundee thought that anthropology had been unfairly treated, and they resented the imputation that they were too prejudiced to enter into free inquiry. There could be no doubt that the prospects of the science were much better than they were before the meeting, and they were indebted for that improved position to the exertions of the people of Dundee in their behalf. He concluded by proposing the thanks of the Society to the Reception Committee at Dundee.

Mr. MACKENZIE congratulated the Society on the fact that they had conciliated the Scotch, which he considered a most remarkable event. How it was done he did not know. He felt assured, however, that if the study of anthropology were properly understood in Scotland, it would find cordial acceptance from all classes in that country.

He seconded the motion for the reason, that, if properly understood, anthropology was the most important study to which man could devote himself. He was glad to find that, though encountering remarkable difficulties, it had established itself at Dundee.

The motion was carried unanimously.

Mr. BRABROOK then moved the thanks of the Society to Dr. Hunt for the manner in which he had dealt with the subject at Dundee. He said they ought to congratulate themselves on having had such an able representative on that occasion.

Mr. CONRAD COX seconded.

The CHAIRMAN said he had often admired Dr. Hunt's courage and ability in fighting in support of the claims of the Society before the British Association.

Dr. HUNT, in returning thanks for the compliment, remarked on the victory which the Society had gained at Dundee, where, with a small force, they had overcome the opposition of a large body; but he said the support received from the local authorities and the justice of their cause had carried the day.

The CHAIRMAN observed, in reference to the paper about to be read, that they were all aware that Captain Bedford Pim had some years since showed the practicability of constructing a railway across the Isthmus of Nicaragua, to connect the Atlantic and Pacific Oceans. The scheme was at first regarded as incapable of being realised, and several eminent men had been sent out with the view of placing the practicability of the project beyond doubt. Mr. John Collinson, the author of the paper, had effected a survey of a part of the country but little known, and in doing so had had much communication with the natives, an account of whom he would now place before them.

Mr. JOHN COLLINSON, C.E., F.R.G.S., read a paper "On the Indians of the Mosquito Territory." [Abstract. The paper will appear at length in the *Memoirs*.]

The author enumerated seven distinct tribes, viz., Mosquitos, Woolwas, Ramas, Valientes, Cookwras, Tongas, and Poyas, but confined his remarks to the three following:—Mosquitos proper, Woolwas, and Ramas. The Mosquitos he considered the most intelligent and enlightened of all, and their superiority was due to the indefatigable efforts of the Moravian missionaries, who directed their efforts, in the first instance, to their civilisation and to the abolition of their barbarous ceremonies. Their stature is short, never exceeding five feet eight inches; they are strongly built, and possess considerable powers of endurance; complexion dark, with finely-marked features; small noses; high cheek-bones; and long, coarse, black hair. The chief of the entire territory must be of the Mosquito tribe, and reigns by direct descent through the male line. The last chief had received a good education, and evinced refined taste, and fondness for the best English poets; his word was law, which was enforced with severity, and yet he was regarded with much affection by his people.

The Woolwas live an exceedingly barbarous life. Among their customs, that of flattening the head in infancy is prevalent. This

and the former tribe are great sufferers from cutaneous diseases, and, with the exception of the late king, the author had not met an individual free from it.

The Ramas are a fine race, many individuals attaining a stature of six feet, and were supposed by the author to have an admixture of Carib or Creole blood. This tribe is feared by all the others of the Mosquito country. They, moreover, commonly speak English, and show other marks of superior capabilities.

The paper concluded with two vocabularies, and was accompanied by the remark that the languages of the natives possess but the merest elements of grammar.

The thanks of the meeting having been given to Mr. Collinson for his paper,

The CHAIRMAN said that the paper had opened a curious question as to the origin of the Mosquito Indians. There could be no doubt that in former days the whole country was occupied by a race superior to those who now possessed it. That was proved by the finding there of large tombs with curious monuments, and pottery, and stone columns and figures. A very curious stone hatchet, very highly finished, was one of the implements found, and was then on the table for inspection. The question was, whether the Mosquitos were the descendants of that people or mere new arrivals. The Chairman adverted to several of the customs of the Indians described by Mr. Collinson, which were, he said, similar to those of other wild tribes, and he especially noticed the superstition of the existence of a large reptile, observing that in other parts of Nicaragua a serpent was said to have been recently seen that was 30 feet long. The Mosquito Indians were fast disappearing, but lately an attempt had been made to protect them, and Captain Pim had undertaken to advocate their claims.

Captain BEDFORD PIM.—I am sure that we must all feel very much obliged to Mr. Collinson for the paper which he has just read, and which will, I hope, form the nucleus of a valuable stock of information regarding the aborigines of this central part of the New World. There are, however, two or three points in reference to the aborigines of the Mosquito coast on which I should like to say a few words. My friend Mr. Collinson speaks with all the force of practical experience, and it will always afford me the greatest pleasure to bear witness to the courage and perseverance with which he did his duty in Mosquito, but I cannot agree in all his conclusions. In the first place, he is slightly in error in limiting the tribes to seven; there are many more; for instance, there is a very important tribe called the Smoos not mentioned by him. Then, again, I cannot agree with Mr. Collinson that the Mosquito Indians proper are the most intelligent and enlightened, *in consequence* of the indefatigable efforts of the missionaries. On the contrary, they have hearts like the nether mill-stone as regards missionary teaching. Had Mr. Collinson instanced the Ramas, who really have been induced to forego the "toona" and take to shirts

and trousers, and who form quite a decent community settled on Blewfield's Lagoon, I should have been more ready to agree with him, although the conduct of one of them, a young man named Abraham (patriarchal only in sin), whom we hired last February in Greytown to work under Mr. Collinson in the cutting, and who was seen reading his Bible the last thing at night, and the following morning had disappeared with a canoe, a portrait of a lady, and other trifles, certainly not his own property, did not reflect much credit on the teaching he had received. The Mosquitos are certainly more intelligent than any other above-named tribe of the country, for the simple reason that their tribe inhabits the coast, and has been in contact with Europeans for nearly two hundred years before missionaries came in contact with them. Again, I was very much struck with a remark made by Mr. Collinson, that the personal appearance of the Mosquitos is decidedly good when uncontaminated by the diseases introduced among them by the traders from the civilised Old World. Now, this is very hard upon the traders, and also upon the Old World. I suspect, if the truth were known, that the traders have suffered as much at the hands of the natives as the natives from the traders. It has long been the fashion to deplore that the debauchery and immorality of the wicked Old World has been engrafted on the poor savage; but the impression I have formed of the noble savage, after seeing him in a state of nature in very many parts of the world, is (to use a Yankee phrase) that he is "the meanest cuss out"; in point of fact, in coming in contact with savage races for the first time, the rule has been to find them with a pretty good load of sin on their backs quite as heavy as the civilised people of the much abused Old World. Look at the Sandwich Islanders, the Mexicans, the Esquimaux—all, every one, seems to like strong drink, and it is even now a disputed point whether syphilis was not introduced amongst Europeans by the very people whose characters we have under discussion to-night. In justice to the Moravian missionaries, I must say this—that a more earnest and hard working and painstaking body of people does not exist; they do not dream of entering into theological disputes with the natives like the Bishop of Natal with the Zulu, but persevere in their daily course; teaching, somewhat in the order of Mr. Disraeli, industry, liberty, and religion. I could supplement Mr. Collinson's very interesting paper with some more of my experience on the Mosquito Coast, but I hope other gentlemen will address the meeting; besides, this is, I trust, but the opening of the campaign on the Mosquito Coast; for, when I mention to you the name of our much esteemed hon. member, Mr. Carter Blake, and tell you that he is now on the borders of the Mosquito country, I am sure you will agree with me that if the aborigines are not thoroughly handled it will not be his fault. My only fear is that, in his zeal and affection for anthropology, he may be tempted to send us skulls and skeletons fresher than we could quite approve of.

Mr. MEYER HARRIS observed, with reference to the apparent mixture of African blood in the Mosquito Indians, that many of the habits and

customs described by Mr. Collinson were similar to those of the natives of Africa, and the vocabulary was also in many respects the same. He thought it very probable that there might have been an admixture of negro blood from the negroes who escaped from slave ships in former times.

Mr. WALTER DENDY asked Mr. Collinson whether he had any conversation with the chief he mentioned as to the habits of the people, with a view to the improvement of their mental capacity. With regard to the introduction of leprosy, he remarked that it was very extraordinary that leprosy should have been considered such a formidable disease among the Hebrews, while among the Greeks and Arabs it was comparatively innocuous. He was confident that the Levitical leprosy was a combination of malignant diseases. With respect to syphilis, he thought it probable that it was not introduced into Europe from the new world, but from Africa or Syria. No medical man, he believed, was of opinion that it originated *de novo*.

Mr. McGRIGOR ALLAN remarked, with regard to the belief of the Mosquito Indians, that the evil spirits were superior to the good spirits, that a similar belief was very prevalent among mankind. The Chinese and other people entertained the same belief; and it must be held also by people who believed that man was created perfect, and that afterwards he became wicked by the superior influence of evil spirits. He agreed with Mr. Collinson in thinking that the Mosquito Indians had been contaminated by the traders, and he protested against Captain Pim's low estimate of the character of savage races, and against the concurrence he had avowed in the American saying that "the noble savage is the greatest cuss out." We should rather be told not to treat the aborigines as we had treated them than to give them hard names. As to the introduction of syphilis, he believed it was not decided how the disease originated. He said that it was the custom in our treatment of savages to go to them with a Bible in one hand and a bottle of rum in the other, and to tell them to be like us or disappear. People of every race had their peculiarities and good qualities, if travellers would take the trouble to find them out, and he instanced the Mexican Natives and the New Zealanders as fine specimens of Aboriginal tribes. [Dr. Charnock incidentally raised the question whether the term "Indian" could properly be applied to savages generally. The name was originally derived from the river Indus, and was given to the natives who were found near its banks.—The Chairman thought Dr. Charnock was going too far in attempting to restrict the meaning so narrowly. It was a name that had become very generally applied.—Major Owen, taking Dr. Charnock's view of the question, proposed that the Society should not use the word in a loose manner generally. He thought it was a matter that should be submitted to the Council.—It having been proposed by a member, as a means of diminishing the confusion of the general use of the term, that wild tribes in the East should be called "East Indians," Major Owen observed that in the East that term was applied only to the half-caste race between the European and native.—The Chairman said it would be very difficult to draw a line. The conversation then ended.]

Mr. COLLINSON replied to the various remarks on his paper. He said with regard to Captain Pim's observations that the Indians were improved by association with Europeans instead of being contaminated, that Captain Pim must refer to those Europeans who were settled on the coast and carrying on a regular trade; but those to whom he (Mr. Collinson) alluded were traders, who occasionally paid visits to the coast in small craft, to traffic with the natives. Those were, as a rule, not the most respectable members of society, and they did not certainly improve the Indians. The original Indians were superior as workmen to the mongrel descendants of the Indians and Spaniards. He could not agree with Captain Pim's opinion of the Moravian missionaries. On the contrary, he thought they went to work the right way to civilise the men, by introducing among them articles of clothing, the means of cooking, and other appliances of civilised life. With respect to the Indian king he had spoken of, and his influence on the people, unfortunately he could do little, for his power had been usurped from him. He was a pure Indian, the king being obliged to be so by the law of the country. With regard to the grammar of the Woolwas, on which a question had been asked, they had none. They had a vocabulary of about 1,000 words, but they did not indulge in the refinement of grammar.

Major OWEN inquired how they put the words together.

Mr. COLLINSON said if they wanted to give a command they used the word meaning command; or if they wanted to express any action, they used the word signifying that action.

The CHAIRMAN was of opinion that Mr. Collinson was mistaken in that respect, for there must be a grammar of some kind, of course.

The meeting was then adjourned to the 19th instant.

NOVEMBER 19TH, 1867.

DR. CHARNOCK, V.P., IN THE CHAIR.

THE minutes of the preceding meeting having been read and confirmed,

Dr. HUNT made some observations on the "Report on Anthropology at the British Association," which was then presented, for the purpose of correcting some misrepresentations by the public press, which had caused adverse comments. It had been represented that the report stated that anthropology was in future to be recognised as a department of the biological section of the British Association, but that statement was not borne out by the report. It should have been said that the anthropologists hoped to be recognised in section E of the Association. He was anxious to correct that erroneous impression, and he trusted that at the next meeting of the Association anthropology would be associated with ethnology and geography in a common section. There had been no guarantee that such would be the case, for it was not in the power of any officer of the Association to give such

a guarantee ; but it was a general feeling of the members that the claims of anthropology to be distinctly recognised were such that they ought to be taken into consideration, and that the anomaly of placing anthropology and ethnology in different sections should be removed. He hoped they had at length got all that they had so long sought for, and it was very desirable that there should be no misunderstanding on that point.

The names of the Fellows and Local Secretaries elected by the Council were then read as under :—

Fellows.—Charles Bennett, Esq., General Post Office, London ; Algernon Joy, Esq., A.I.C.E. (late Royal Artillery), Church Style, Rochdale, Lancashire ; Charles Henry Bagnall, Esq., Farnham, Surrey ; A. C. Brobner, Esq., Audit Office, Somerset House ; George Bryant, Esq., India Office, John Davidson, Esq., Morrison's-ct., Wellgate, Dundee ; Duncan W. Forbes, Esq., M.R.C.S., The Rookery, Eastwood, Notts ; Charles Edward Gover, Esq., Principal of the Military Male Orphan Asylum, Madras ; George Courthope Green, Esq., Fernside, Whitebrook, near Monmouth ; The Rt. Rev. Alexander Gregg, D.D., Bishop of Texas, United States, 8, Craven Street, Strand, W.C. ; Henry Harland, Esq., M.D., The Middle House, Mayfield, Sussex ; J. Penn Harris, Esq., F.R.C.S., 5, Rodney Street, Liverpool ; T. C. Hope Johnstone, Esq., 48, Upper Baker Street ; George Byrne Lee, Esq., 27, Richmond Road, Westbourne Grove, Paddington ; Henry Bowden Lyle, Esq., M.R.C.S. 123, Graham Road, Hackney, N.E. ; Charles Thomas Pearce, Esq., M.D., M.R.C.S., 28, Maddox Street, Regent Street ; Captain J. Walmsley, Government Resident Agent, Port Natal ; Thomas R. Tatham, Esq., M.D., Nottingham ; Albert Tootal, Esq., Rio de Janeiro ; John Wilkins Williams, Esq., M.R.C.S., 34, Bruton Street, Berkeley Square ; John Marmaduke Stourton, Esq., 2, Vigo Street, Regent Street ; Major George Alexander James, F.R.G.S., Cherson House, Wood Green, Middlesex ; C. S. Salmon, Esq., Sherbro, W. C. Africa ; Frank Wenham, Esq., 25, St. Paul's Crescent, N. ; Joseph Ince, Esq., F.L.S., F.C.S., F.R.M.S., Associate of King's College, 26, St. George's Place, Hyde Park Corner, S.W. ; Robert Bruce, Esq., Seafield Road, Dundee ; Professor A. Shumann, Ph. Dr., B.A., Onslow Villa, St. John's Park, N.

Local Secretaries.—Don Julio Vizcarrondi, 4, Soldado, Madrid ; W. L. Distant, Esq., Post Office, Penang ; Dr. Kalmus, Brünn, Moravia, Austria ; G. Kasimates, Esq., LL.D., Hermonpolis (island of Syra, Greece) ; Dr. Sutherland, Surveyor-General of Natal, Port Natal ; Alfred Robert Houghton, Esq., Sarawak, Borneo ; Rev. T. W. Webb, Principal of the Training College, Barbadoes.

Honorary Fellows.—Professor Schaaflhausen, Bonn ; Professor von Düben, Stockholm ; Professor A. Ecker, Freiburg, Switzerland ; Dr. E. Dally, Paris ; C. Carter Blake, Esq., F.G.S.

Dr. Delgado Jugo, 50, Calle de San Bernado, Madrid, was elected a corresponding member.

The following long list of presents, including seven skulls from

Burmah, which were on the table, was then read, and thanks were given to the donors :—

FOR THE LIBRARY.

From Dr. HUNT—Memoir of the Historical Events of Pennsylvania ;
Revue International, Nos. 1, 2, and 3.

From the AUTHOR—Intellectual Severance of Man and Woman, by
J. McGrigor Allan, F.A.S.L.

From T. Squire BARRETT, Esq., F.A.S.L.—An Apology for the True
Christian Divinity, R. Barclay ; Memoir of Stephen Gellett, B.
Seebohm ; Journal of George Fox, Wm. Armistead ; Observations
on the Views and Practices of the Society of Friends, J. J. Gurney ;
Epistles from the Yearly Meeting of Friends, vols. 1 and 2 ;
Anonymous, Christian Doctrine, Practice and Principles ; Anony-
mous, Life of George Fox ; Henry Tuke, The Discipline of Reli-
gion as Professed by Quakers ; Anonymous, various Tracts re-
lative to the Quakers ; Westminster Review, from January 1824,
to March 1845, inclusive, and many imperfect numbers ; R. P.
Knight, Analytical Inquiry into the Principles of Fast ; James
Hinton, Man and his Dwelling Place ; Anonymous, Approxima-
tions of Truth ; W. White, Historical Papers ; John Garwood,
M.A., The Million-peopled City ; W. C. Taylor, LL.D., The Bible
Illustrated from Egyptian Monuments ; J. A. Macdonald, The
Principia and the Bible ; J. J. Freeman, A Tour in South Africa ;
A. H. Layard, A Popular Account of Discoveries at Nineveh ;
E. B. Tylor, Anahuac, or Mexico and the Mexicans Ancient and
Modern ; Lord Walpole, An Answer to the latter part of Lord
Bolingbroke's Letters on the Study of History ; Henry Travis,
M.D., Moral Freedom Reconciled with Causation ; T. Hancock,
M.D., Essay on Instinct ; T. Exley, A.M., Principles of Natural
Philosophy ; Anonymous, The Friend, vols. 1, 2, 3, 4, 5, 6 ; F.
Seebohm ; Osmond de Beauvoir Priaux, National Education, its
Principles and Objects ; Rev. S. Noble ; Hon. E. Swedenborg,
The Divine Providence ; D. Hume, Essays and Treatises on several
Subjects, vols. 1 and 2 ; J. Timbs, The Year Book of Facts, from
1845 to 1861 (inclusive) ; A. Ballou, An Exposition of Views
respecting the Modern Spirit Manifestations ; W. Wilberforce, A
Practical View of the prevailing Religious System ; W. Cobbett,
A Year's Residence in the United States of America ; Cobbett's
Twopenny Trash, or Politics for the Poor ; Locke's Essays con-
cerning the Human Understanding ; J. Richardson, Lectures on
Natural Theology ; Rev. J. R. Balme, American States, Churches,
and Slavery ; A. Ameuney, Notes from Life of a Syrian ; D.F.G.,
The Spiritualist ; Anonymous, Remarks on the Writings and
Conduct of J. J. Rousseau ; Anonymous, The Progress of the
Confessional ; R. Macnish, LL.D., The Anatomy of Drunken-
ness ; (Sceptic), An Exposition of Spiritualism ; Anonymous, Is it
right for a Christian to marry two Sisters ? W. Paley, D.D.,
Horæ Paulinæ ; Dryden's Miscellaneous Essays ; Anonymous,

Table-Turning and Table-Talking ; Dr. W. Evans, A Pure Mind in a Pure Body, that is Health ; C. Southwell, The True Origin, Object, and Organisation of the Christian Religion ; E. Hoyle, An Inquiry into the Truth of Christianity ; Anonymous, "Human Nature," from April 1st to November 1, 1867 ; Professor P. C. Sinding, History of Scandinavia ; J. Rawlings, History of the Origin of the Mysteries and Doctrines of Baptism ; L. Burke, The Future, Nos. 17, 18, 19, 20 ; American Phrenological Journal, Nos. 1, 2, 3, 4, 5, 6 ; The Correspondent (various numbers), 1865 and 1866 ; various Religious Tracts, Devil and Hell, etc. ; J. S. C. de Radius, Historical Account of every Sect of the Christian Religion ; Anonymous, A Winter Journey from Gloucester to Norway ; J. Priestley, LL.D., Observations on the Increase of Infidelity ; M. De Condorcet, Historical View of the Progress of the Human Mind ; R. Ainslie, and others, Lectures against Socialism, etc., and Various Tracts.

By the EDITOR—The Canadian Journal.

By the EDITOR—The Farmer's Journal.

By Professor SCHAAFFHAUSEN—Vortrag ueber die anthropologischen Fragen der Gegenwart.

By the SOCIETIES—Proceedings Royal Geographical ; Bulletins de la Société d'Anthropologie de Paris ; Journal Royal Institute, Cornwall.

FOR THE MUSEUM.

By W. THEOBALD, Esq.—Seven Burmese skulls.

The CHAIRMAN observed that the one hundred and fifty volumes presented by Mr. Squire Barrett, deserved the special thanks of the Society.

Dr. HUNT stated that at the meeting of the Council that day, a subject of considerable importance had been brought before them by Mr. Wilmot Rose, C.E., who submitted for inspection upwards of fourteen hundred specimens of flint and stone implements, of all ages, collected in Denmark and Sleswig-Holstein. No collection like it was to be seen in this country, and it was the most complete of the kind that had been made. It would be allowed to remain in their museum for a considerable time, for the inspection of the Fellows and their friends, with certain restrictions to ensure the preservation of the specimens. He hoped that Mr. Rose, who was present, would explain the principles on which the collection had been arranged, and on that day month there would be a public exhibition of them, and a paper would be read on the subject. It was expected that several gentlemen who took interest in the subject would be present, and that there would be a general discussion on the important collection.

Mr. W. J. ROSE said the formation of the collection of stone implements had been the work of five or six years, and that it consisted almost entirely of stone and flint implements, purely Danish. Every kind of stone implement was represented, from the rude stones from

which the others were made to those most highly finished. He said he should leave the collection with the Society, to be inspected, and he should be present to give any information that might be required.

The following paper was then read :—

Is the Character of the Scotch the Expression of the Soil of Scotland?

BY JOHN CLEGBORN.

Mr. CLEGBORN noticed that the diversity of character in the east and west country Scotch was very great, and the diversity, he ascertained, could not be imputed to climate. He observed, too, that the inhabitants of each county in Scotland had its own dialect and its own type of man; and that in Caithness, the natives of each of its parishes have distinctive features and dialect. The author found that in Caithness the best cereals, cattle, and men, were raised on the boulder clay, and that where it was wanting the corn, cattle, and men were miserable.

THE AREA OF THE BOULDER CLAY IN SCOTLAND.

He ascertained that the area of the boulder clay in Scotland was, on the east, of a line running from Dumbarton to near Sandside in Caithness, and that this line divides the country into two strongly-contrasted regions, an eastern and a western. The east is a land of enormous depositions; the west, one of equal waste and transport. To ascertain the character of the organisms on each side, he took the Board of Trade returns, and from these constructed the following tables, showing the population, area, acreage of crops, corn crops, and number of cattle and sheep in the east and west, dividing the country as near as he could, to harmonise with the line indicated by Professor Nicol, as that which divides the country into two strongly-contrasted regions. The counties on the east are Aberdeen, Banff, Berwick, Caithness, Clackmannan, Edinburgh, Elgin or Moray, Fife, Forfar, Haddington, Kincardine, Kinross, Linlithgow, Nairn, Peebles, Perth, and Selkirk. On the west, Argyle, Ayr, Bute, Dumbarton, Inverness, Lanark, Renfrew, Ross and Cromarty, Sterling and Sutherland :—

	Population.	Area in Acreage.	Under Crop.	Under Corn.	No. of Cattle.	No. of Sheep.
East	1,330,989	6,868,384	2,328,212	872,141	440,476	1,802,248
West	1,448,653	10,102,637	1,038,636	284,260	553,253	2,304,046

Of the comparative value of the corn, the cattle, and the sheep of the two sides, these returns tell us nothing; but the value in favour of the east must be great, seeing Aberdeen sends the best beef and mutton in the London market, and more of these than all the rest of Scotland, while the west sends none there. The state of the inhabitants on the two sides he now looked at, and took the Registrar General's

Report for 1864, and from that report constructed the following table:—

Births.	Illegitimate per cent. for ten years.	Marriages.	Deaths.	Respiratory Deaths.	Zymotic Deaths.
East 47,831	10 per ct,	9,767	30,360	3,749	7,749
West 56,517	6 per cent.	11,388	39,055	5,746	10,508

The birthrate of the west is greatly in excess of the east rate, through the operation of this law, made known by Doubleday: "Nature only causes an increased productiveness when species is put in danger, and in the ratio of the danger." "This law," says Doubleday, "runs through the vegetable and animal creation. The plant or animal that is starved as to natural aliment, is prolific in proportion. Hence all rich aristocracies decrease, all poor communities increase. Nature, by this beneficent law, causes luxury to be barren, to stop the progress of disease, and poverty to be prolific, to save the species from extinction. In a comparison of the English and Scotch birthrates, we see the same truths taught. There can be no doubt that the English dietary is, in quantity and quality, far higher than the Scotch; and the Registrar-General tells us that in Scotland 348 wives give birth to 100 children, while it requires 386 wives in England to produce 100 children in the year. The low illegitimate rate of the west, apparently so indicative of thought, is thus explained. The dissuasives from illegitimacy are the same on the east that they are on the west; it follows, then, that on the east the promptings must be stronger than the dissuasives, while on the west the dissuasives must outweigh the promptings; therefore the *vis vite* must be less energetic on the west than it is on the east. That this must be the cause of the low illegitimate rate of the west, is what the table showing the food produce of the west would imply; but it is put beyond a doubt by these facts that the bastardy rate of the east is highest in the counties where the cereals and cattle are in the highest perfection, and the higher faculties of man best developed. The highest illegitimate rate on the east, then, evinces in its population *generally* an amount of restraint so great as can only exist among men and women of a high order. This sentiment is well expressed by Hume when portraying Queen Elizabeth's character. He says: "In her family, in her court, in her kingdom, she remained equally mistress. The force of the tender passion was great over her, but the force of her mind was still superior; and the combat which her victory visibly cost her serves only to display the firmness of her resolution and the loftiness of her ambitious sentiments." The evils of low nutrition, or in other words, the want of soil, is further shown in the high marriage rate of the east. Notwithstanding their want of soil, their low dietary, and the consequent apathy there must be in their men and women, their slight promptings to marriage are at once gratified, heedless of all the evils improvident marriages necessarily entail. But the chronic starvation of the west

is put beyond doubt by the high death-rate of the west. Had the west rate been that of the east, the deaths would have been 34,133, and not 39,055, as we find it is; thus nearly five thousand fall a prey to destitution annually. That the excess at least arises from want of nutriment, appears from these facts; that the deaths of the west from affections of the respiratory organs were nearly 1,000 in excess of the east rate, and of children more than 2,000 died in excess of the east from zymotic diseases. "Consumption," says Dr. Hewitt, "in its many forms and disguises, appears to be essentially connected with want of food."

The want of soil, the want of food, on the west, is further seen in the Gaelic, for it and heather go together. On the west, too, there is one university, on the east three. On the west the most distinguished generals have been produced, on the east the most distinguished scholars. Aberdeenshire has turned out more *senior wranglers* than all the west, perhaps than all Scotland. The religious revolutions of the Scotch have arisen on the east. On the west they move in masses. At the Reformation the west was governed by the chiefs; at the disruption, by the minister. The west man's religion may be shortly characterised: priest-worship, *i.e.* the worship dictated by the priests. The east man's as self-worship, or in other words, the worship which the individual eliminates for himself from sources of information which he possesses, and the process of his own thoughts. Though called Protestant, the religion of the west is essentially Papish, and Popery is the religion of poor soils. The east man is taller and bigger-headed than the west man. Mr. Cleghorn thinks that diversity in man is necessary to the health of the species, and that diversity in soils is the means for its attainment, and the law that determines diversity in soil he discovered in 1857. The law is this: the prevalent wave-producing wind here, and over the northern hemisphere, the S.W. wears the headlands into precipices, which send back the debris by counter or reflux current, which necessarily tends to shoal up the opposite side of the bay, firth, or sea. The contour of our east and west coasts arises from the action of this law, and it has determined the soil of the country. The soil has determined the food, the food has made race, and has determined the birth-rate—legitimate and illegitimate—the marriage-rate, and the death-rate, language, and religion; therefore the character of the Scotch is the expression of the soil of Scotland.

[This paper will appear in full in the Memoirs of the Society.]

The thanks of the meeting were given to the author of the paper.

The Rev. Dr. IRONS wished to know whether Ireland was to be regarded as the west of Scotland, and whether any difference was admitted to exist between the two sides of Ireland.

Mr. A. L. LEWIS agreed with the author of the paper, that great influence is exercised on the character of a people by soil and climate, but in the instances adduced he thought the differences were attributable rather to difference of race than to the character of the soil. He differed also from the author in his conclusions respecting the difference in the numbers of illegitimate births, and as to the effects of the winds, and on some other points, but there was much in the paper with which he agreed.

Mr. G. HARRIS said that no doubt it appeared that climate and soil have considerable influence on the character of the inhabitants, but they were not the principal causes of differences. Difference of character was often observed without differences of soil; in confirmation of which he referred to several parts of the Continent, where, with soil equally rich, the characters of the people were very different.

Mr. McGRIGOR ALLAN thought the author of the paper had not exactly made out his position, that the character of the soil influenced the character of the people. Dr. Knox was against him on that point, and he (Mr. Allan) was disposed to disagree from Mr. Cleghorn. He doubted whether the western winds had the baneful effects they were said to have, and thought the effects of the east winds were much worse. It was also against Mr. Cleghorn's views that the principal commercial town in Scotland was situated in the west. He was inclined to attribute the differences in the character of the Scotch to difference of race, which induced the Gael to cling to the mountains, and the Anglo-Saxons to prefer the lowlands, and that they were thus rather associated by inclination to the soil and climate than influenced by them. As to Scotch marriages, there was an erroneous impression in England that the ceremony of marriage was almost dispensed with in Scotland, and that the consent of the parties only was necessary. If that were so, it was based on the opinion of the most eminent English lawyers that mutual consent of the parties to live together constituted a marriage. Mr. Allan was proceeding to enter more fully into the subject when the CHAIRMAN interposed, reminding him that this question was irrelevant to the matter of the paper.

Mr. J. MEYER HARRIS said the question was, what was the effect of soil and climate on the inhabitants, which might be resolved into the consideration of a question of food. Different soils produced different qualities of food, the effect being experienced by animals as well as by men, and that was a likely cause of difference in the characters of people of different countries.

The Rev. Mr. BEATON remarked, in reference to the alleged difference in intellectual character between the inhabitants of the west and of the east of Scotland, that in the University of Aberdeen the majority of the students came from the western part of the country; and he thought, in opposition to the author of the paper, that the greater superiority of intellect was exhibited by the inhabitant of the west of Scotland.

Mr. MACKENZIE expressed disappointment with the paper, in which the Scotch character was not discussed at all. It entered into a variety of details about legitimacy and illegitimacy, about priest-worship and self-worship. The paper was topographical, geographical, agricultural, but not anthropological. It might have been compiled from the registrar's reports at Somerset House for presentation to the Statistical Society, instead of being prepared to be read before a meeting of anthropologists, and he was astonished that a countryman of his should have treated such a subject in such a manner. Soil and climate, he thought, must have some influence on race character, and he hoped to have heard that question brought forward and investigated, but

nothing of the kind had been done in the paper, which he did not think did credit to the intellectual and literary talent of his countrymen. He thought the question should be pursued with larger views, and upon a larger field of observation, and considered with reference to mixed races. In the north of Scotland the influence of different races on the natives was perceptible, but he disagreed with the author of the paper as to the difference of character between those on the east and west. Difference of food, no doubt, had an influence on character, but he did not consider the author was warranted in the general conclusions he had drawn in his paper, for the area of observation had been too small, resembling that of White's Selborne.

Dr. HUNT thought the paper was, for the most part, strictly anthropological. The author asked the question—"Is the character of the Scotch the expression of the soil of Scotland?" That was an important question, not previously sufficiently touched on by anthropologists. He did not appear as the advocate of Mr. Cleghorn, but he must say he thought there was a deal about anthropology in the paper. The more they investigated their science the more they became convinced of the connection between the characteristics of man and the circumstances by which he was surrounded. By the word soil, Mr. Cleghorn took into consideration the whole phenomena and conditions in which the Scotch are placed, and founded certain conclusions upon them. Seeing that the science of anthropology is little more than organic chemistry, the question of external influences was an important one for their consideration, and he hoped the author's views would be deliberately discussed. The author of this paper said that our best cereals, our best cattle, and our best men and women were raised on the boulder clay of Scotland. They were not in a position to deny that statement, nor his other statements as to the difference between the people on the east and west coasts. Were these facts, or were they not? Again, as to the statement that the west part of Scotland was more remarkable for its warriors than the east, several instances might be adduced in confirmation of that opinion. Then, as to the alleged effect of luxury in producing barrenness, that was a physical question of great importance, well deserving consideration. As to the statement that the people of the west of Scotland worshipped their priests, and that those on the east were disposed to inquire into religious matters for themselves, there was nothing so wonderful in that, if it be admitted that language and religion are influenced by circumstances as well as character. As he before observed, they should consider the question as one of organic chemical anthropology. Mr. Lewis had said that all the differences observable between the people on the west and on the east of Scotland might be attributed to difference of race. The author of the paper did not think so, but considered that the explanation of the difference might be found in the difference of climate and soil. He was himself inclined to attach a great deal of the diversities to race distinctions, at the same time the author of the paper presented another view of the question. He thought they were to be explained by climatic and geological differences, and that the difference in the characters of the Scotch on the east and west coasts

were to be explained by them. Mr. Cleghorn's hypothesis well deserved consideration, and they were indebted to him for having given them a most suggestive paper.

Mr. CARMICHAEL expressed the opinion that the author of the paper was mistaken in stating that the people in the west of Scotland were priest-worshippers.

The Rev. Mr. MACBETH did not agree with Mr. Cleghorn's conclusions, but thought he had presented many facts that were worthy of consideration. The question was, whether the difference observable in character between the people of the west and east was due to soil and climate or to difference of race. There was no doubt a striking coincidence in the boundaries of the two races, and in the character of the districts they inhabit, but he thought it rather showed that affinities exist between the natures of the soil and the character of the races. There were social distinctions apart from soil and climate; but that the latter have an influence on character he thought no anthropologist could deny, and their influence ought to be recognised. There could be no doubt that they had great influence on the Irish character. There were several facts given in the paper which did not appear to have a bearing on the question, and there was a certain development of the humour of his countrymen, especially about legitimacy and illegitimacy, which made him suspect the author was "trying it on." There were at the same time many important facts mentioned, one of which was the assertion that the shore on one side of Scotland was rising up, and on the other going down. The alleged difference in size between the men on the east side and on the west he attributed principally to racial distinctions.

The CHAIRMAN said the object of the paper seemed to be to show that the people in the eastern part of Scotland were of a higher character than those in the west, but he was not inclined to agree with the author in several of his conclusions. Difference of race between the Gaels and the Saxons might account for many of the differences observed. With regard to religion, he did not think that the people in the east, who were said to be self-worshippers, were any better in that respect than the priest-worshippers of the west. With regard to the conclusions drawn from the facts stated about illegitimacy, he considered that the author of the paper was altogether wrong, and that the inferences from his facts were the reverse of those he had drawn. It had been said that the whole question resolved itself into a question of food, but there were other causes on which the character of a people depends. The improvement of character did not depend upon the nature of the soil, for the most civilised people might exist in a wholly manufacturing country.

Mr. MACBETH having been called on, as a fellow-townsmen of Mr. Cleghorn, to reply on his behalf to the observations on the paper, said that he had no doubt Mr. Cleghorn would feel highly gratified by the manner in which his paper had been received.

The meeting then adjourned.

DECEMBER 3RD, 1867.

DR. CHARNOCK, V.P., IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The members elected since the last meeting were announced as under:—

Fellows.—J. R. Spencer, Esq., Oxford; Edward Jackson Riccard, Esq., M.D., Mauritius; John Cuthbert, Esq., Belmore House, Winchmore Hill, N.

Local Secretary.—Dr. M. H. Henry, surgeon, was elected a local secretary for New York.

The presents received were as follows:—

FOR THE LIBRARY.

From JAMES GOWANS, Esq.—Sketch of the New Anatomy and Physiology of the Brain and Nervous System.

From the AUTHOR—A Visit to the Kibalen Village of Sano Bay, Formosa; Dr. C. Collingwood.

From the AUTHOR—Die Wanderung der Amerikanischen Völker aus dem Norden; Professor Buschmann.

From the INSTITUTE—Journal of the United Service Institute.

From the ACADEMY—Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, 1866 and 1867.

From the INSTITUTE—Giornale de Scienze Naturali di Palermo, vol. iii.

From the EDITORS—Medical Press and Circular and the Farmers' Journal.

FOR THE MUSEUM.

From Dr. KOPERMIKI—A Rumanyo or Wallachian Skull of Transylvania.

From Dr. EDWIN CANTON—Five Chinese skulls.

Dr. HUNT, referring to the five Chinese skulls presented to the Society by Dr. Canton, which were on the table, observed that they were very peculiar, as being very different in their respective characters, considering they were stated to be the skulls of individuals of the same nation. He announced that the exhibition of the very interesting collection of stone implements was now to be seen daily by Fellows of the Society and their friends, and that Mr. Rose kindly undertook to explain them. He also announced that the Council had that day passed a vote of condolence to Madame Bopp on the death of her husband.

The following paper was then read by Mr. Walter C. Dendy:—

The Anatomy of Intellect. By WALTER C. DENDY, F.A.S.L.

THE science of mind has become almost as much a party question as the polity of the nation, and has, unhappily, fostered that partial

spirit of debate that renders it often more a struggle for victory than a contest for truth. The mystery that yet envelopes the subject lies, I believe, in the conflicting opinions that have been expressed regarding the elements of the *intellectual* and the *immortal*. Aristotle and Thales affirmed $\Psi\upsilon\chi\eta$ to be "the source of the intuitive, the sentient, the cogitative, and the motor forces;" the saints, Chrysostom, Augustin, Cyprian, Ambrose, Eusebius, believed that the soul was thus manifested through the body; and it is the prevalent belief both of the theologians and of laymen that in the words of Morel, "the soul existed before consciousness." Then it was the creed of the ancient heathens that one common mind—*Anima Mundi*—pervaded the universe, the great spirit of the Hindu and the Red Indian, and the mental element is affirmed by Pritchard and Lyell and Laycock as "dominant over matter," or, in the words of Aristotle, "The mind hath that commandment over the body as the Lord over a bondsman."

From this introfusion of $\Psi\upsilon\chi\eta$ and *vous* has arisen that metaphysical tone of psychology which, notwithstanding the learned lucubrations of philosophy and spiritualism, has left the real science of mind yet in abeyance. The accomplished essays of Stewart and Hamilton and Mill are loaded with abstract speculation, and the more scientific researches of Laycock and Maudsley, although bearing in high relief the semblance of truth, may be regarded rather as beautiful and elaborate essays than as real expositions of mental science. Now, it may be very easy for us to cut the gordian knot of this solemn question, to argue that soul is mind in its ethereal and unfettered state, and mind is soul in combination with matter. It may be so; but this *petitio principii* would at once freeze up discussion, and cannot satisfy the scientific student who draws an inference from demonstration, and who is unwilling to let so vital a subject thus go by default. It is, therefore, the legitimate province of the Anthropological Society to grapple with this dilemma, by illustrations of the nervous system in the broad clear light of pure physiology—the Anatomy of Intellect. Even the first step, however, may be a delicate one. There are points of very deep import on which learned fellows, all equally conscientious, are point blank at issue, Divine creation and autogenesis, germinal evolution and spontaneous development, predestination and free will, the dominion of mind over matter, and innate organic action being fairly set in array against each other. These disputations I will not presume to reconcile. I will rest content *in limine* with claiming the credence of the Society in one simple axiom:—matter, ere it can act, must be specially endowed with the faculty and force of action. To the mysterious source of this endowment I desire to waive the slightest allusion; they who drag theology into scientific discussion, are far more irreverent than those who deem it a subject too sacred to be submitted to the test of philosophic speculation.

The doctrine of mind seems to have been to some very learned beings a mighty awful thing. The Queen's counsel, Warren, shrinks back in despair as he doles out this rhapsody—"What is intellect? In merely asking the question, we seem suddenly sliding into a sort of abyss." Then there is the most erudite spinster, dazzled by her self-

creating law, and, perchance, by the brilliant illusions of metaphysic dreamers from Berkley to Coleridge, and ignoring the demonstrations of physiology, bewailing that "we are hopelessly adrift on the sea of conjecture about the truth of mental science." Even the classic Grote becomes pathetic regarding our hopeless perplexity. It was confessed in this room that, "of the mind and soul we know nothing," and then came this startling question—"Is there a mind at all?"

With conscious diffidence, I think we ought not to be silenced by the facetious quibble—"What is mind? No matter. What is matter? Never mind." To science it is a matter of great moment, and whether mind be an entity or be it not, there is a halo of wonderful phenomena floating within us, for which it is essential that we adopt "a local habitation and a name." The old ethereal word "psychology" is yet in high fashion, and it may be fairly retained by the theologian as the revelation of soul or spirit, while I may presume to propose the term "Noosology" as the exponent of the science of intellect. Regarding the presence chamber of the soul or mind, the crotchets of the ancients were whimsical enough—Empedocles fixed on the blood, Chrysippus and Diogenes on the heart, Van Helmont on the *pylorus*, Galen adopted the brain, Lancisi selecting the *corpus callosum*, Sömmerring the *ventricular* fluid, Descartes the *pineal* gland, and so on. It was Albrecht Bishop of Regensburg who, I believe, had the first glimpse of organic phrenology; and Gall and Spurzheim enfranchised the brain, and in their distribution of seats projected that fascinating scheme of craniology that has, I fear, led many a doting proselyte astray from the true study of encephalic organism. Fully appreciating the early researches of Gall and the lucid demonstrations of Spurzheim, I may yet differ from them *tota cælo* regarding their fanciful allotment, and for these reasons. Among the darker passions of our nature, there are two which constitute the sources of the deadliest crimes that stain the pages of the *Newgate Calendar*—destructiveness and amativeness—and their organs are very broadly pencilled out for us on the cranial map, yet the cases of fallacy are innumerable. I remember, for one instance, the body of Thurtell being brought into Bartholomew's, and the peculiar depression of the temporal region was evident to all. As a rule, the skulls of young girls are beautifully smooth and rounded; there is no cranial boss to indicate an organ of destructiveness beneath, yet infanticide has become the fashion in the circles of servant-girlism. The analogy of the tiger and the man is a mere conceit. With the *feræ* there is an instinctive and vital necessity for killing,—hunger; not so with man, he has either some deep illusion, or some malignant motive for the crime of murder. Then, as to the amative organ: regard the animal under the excitement of the œstrum, the frenzy of the buck at rutting time, the rage of the tiny sparrow in the pairing season, merely because their testes are swollen to five times their normal size when sexuality is passive; or take the negative, the castrato in whom desire is destroyed; the intromittent organ is still perfect, but that of amativeness is cut away, leaving the eunuch passive even in the chambers of the harem, looking, indeed, with loathing on the odalisques. Then, regarding lesion,

it may be that the cerebral hemispheres are vicarious, yet their endurance of very severe mutilation is not favourable to craniology. I cite [two cases. One patient was Dr. Conolly's. St. John Long's lotion had destroyed the left parietal bone and hemisphere, leaving "an awful yawning chasm." Yet the man lived on for months, retaining all his mental faculties perfect, and his ideas most clear even within a few hours of his death. The other patient was my own: he fell on a pier of Waterloo Bridge and then into the river, skull cracked and drowned. After resuscitation I trephined the bone, and removed a basin full of brain: the mental faculties, although faint and feeble, being existent for many days, until hæmorrhage suddenly proved fatal. With due honour to the Belvedere Apollo it may be stated that the high frontal development, although commonly indicative of lofty intellect, is not, from varied extent of bone and diplœ and sinus, *diagnostic*: even the front of Jove himself may grace many a graceless fellow. There is on the contrary many a lofty mind working magnificently within a deformed skull. True, the heads of Dante, Cervantes, Shakspeare, Humboldt. Cuvier, Byron, were graced with lofty fronts, but those of Cicero and Bichat were misshapen, and that of Curran and many other illustrious men were most unpromising: that of Scott was almost pyramidal.

I believe, therefore, it matters little *how* the brain be packed, whether within a quadrant or a triangle, the scope of intellect depending more on its *quality*, its firmness, comparative weight, and the complexity of its convolutions and their secondary gyri, than on mere cranial outline or comparative size, or heaven help the shelving foreheads. The brain of Cuvier weighed more than four pounds, that of Dupuytren five; that of the idiot ranges from one to two, the average being about three, i.e. fifty ounces in the male and forty-five ounces in the female. It may be stated that the brain of the Caucasian yields to that of the Mongol in size though not in comparative weight. Even the mincopies of the Andamans, the lowest human beings in the scale of intellect, often display cranial proportions that would not disgrace the Caucasian. The convolutions of the brain of Gauss, the great mathematician, were so complex as not to be demonstrated. There must, however, be plenty of good brain in some shape or other, or we may have the low intellectual type of the Aztec or the Bojesman, whose numeration ends at three, or that of Pinel's lamb-headed girl, who went about bleating plaintively with an occasional "ba" by way of symphony. Yet the hemispheric ganglion is not an "ignorant mucilage," as Buffon very rudely terms it: it has been demonstrated by Gratiolet, Huxley, and others, as a tissue of beautiful uniformity, deeply associated with intellectual and vital forces. It seems indeed a sort of electric telegraph between the most remote regions of the body. Simple concussion may, like the lightning flash, annihilate in a moment all sensation, and even life itself.

The *duplicity* of the hemispheres may, I believe, be the source of many eccentric mental phenomena, if they be in opposite conditions of development or power. Tiedeman's patient seems to have reasoned with one hemisphere on the imbecility of the other. Tucker also, in

his "Light of Nature," believes in two wills, constantly opposing and controlling each other; and we may believe that such a contest may induce that unhappy phase of mind we term indecision or fickleness.

These are the weathercocks of society, resolving now on one thing and then on another, and constantly lisping forth in tremulous accents, "What ought I to do?" and perchance doing nothing. In its deeper moral phase it may remind us of the Kitchi and the Matchi Manitou of the Red Indian, the good and the bad Spirit contesting for the possession of man's heart. Seriously—may it not elucidate the paradoxical traits of Swift, Byron, Burns, who were ever scribbling virtue while they were acting vice; and it may even throw light over the rationale of insanity, that so bewilders the theologian, the lawyer, and the minister of State.

In our study of intellect, however, it is expected that we look more deeply among the tissues of the brain, especially those which lie within its recesses at the base of the skull—delicate membranes, plexuses, commissures, tubercles, glands; and sinuses of blood and cords of neurine crossing and recrossing, forming the great connecting commissures of the brain, the cerebellum, and the spinal marrow, thus constituting within a ring fence the roots or termination of the whole nervous system. It is within this structure, I believe, that lies the grand secret, yet undiscovered, of impression, sensation, perception, ideation, reflection, volition, that combination of faculties which we conventionally term mind. It is here that may commence the study of the source of intellect in the senses, which may perchance solve the query of Reid—"What is a visible figure; is it a sensation or idea; if an idea, from what?" and the notion of Descartes and Locke, that the qualities of bodies are mere sensations of mind. In three of the senses—sight, hearing, smell—these qualities may act from a distance; the flashing of light, the undulation of air, the wafting of an odour. In the other two there must be contact of a body with the fibrilla of a wave.

In illustration of these propositions, I will endeavour to trace the genesis or evolution of an idea in harmony with the philosophy of Locke and the principles of Reid—"Nihil in intellectu quod non prius in sensu," selecting the physiology of the most precious and most beautiful of the senses.

The sense of sight is not in the *organ* of vision. The eye itself is a mere optic instrument, of most exquisite construction, and fitted with lenses most delicate and true. Rays of light from an object flash through the *cornea*, and being refracted from the *crystalline*, impinge, upside down, on the *retina*. But vision is not yet. This impression is simple sensation. From the meshes of the retina springs the great optic nerve that takes its course to the central lobules of the brain, and there intermingles with its *thalamus* and tubercles; and here, we may believe, it imparts perception. Now, if this nerve be cut asunder, or paralysed, as in amaurosis, the vision is intersected or lost. The image is still on the retina, but the brain receives no impression. If, however, the optic track be perfect, the image will be transmitted in its normal position to the inosculation of the nerve with the brain;

and there, we may believe, will be perfected the conversion of an impression into an idea—light, colour, form. This is almost a demonstration; and yet the phrenologist will still argue that “the perceptive organs are in close approximation to the instruments of sense to which they relate.” And what becomes of this idea? it is too precious to be lost. From the intimate and direct communication of the optic tubercles and thalamus both with the cerebellum and the spinal cord, but chiefly with the hemispheric ganglion, we may infer that it is conveyed to the nerve-cells; thus intellect becomes perfect, its two great points being ideation and reflection.

In the cells of the ganglion they may lie in abeyance, to be revived by association or recollected by the will, thus constituting the faculty of memory—poetically, “the mind’s eye”—that may see an object in dream or reverie as clear and true as in its waking contemplation of reality.

The higher the force and freshness of this revival, the higher (*ceteris paribus*) will be the grade of intellect constituting the element of learning, and even supplying genius itself with fuel for the fire of its imagination. Fancy, in its most fascinating and eccentric flights, is indeed memory run wild. “Sense sendeth over to the imagination before reason have judged.”—*Bacon*. Shakspeare did not create new worlds; it was his mighty genius that arranged and arrayed in fresh beauty and wisdom the precious store of ideas housed within his brain. If this may be a truth, the selection of one absorbing idea from its cell may illustrate “the ruling passion strong in death,” and the abstraction of Pliny amid the ashes of Vesuvius, of Parmegiano and Protogenes, during the sieges of Rome and Rhodes; and of Newton during the composition of the *Principia*. I have thus offered one illustration of simple intelligence. Take an example of the more complex kind,—reflex action. A fly settles on the cheek and irritates the skin; the afferent or sensory nerve, by a flash from the spinal cord, informs the brain, and that instantly wills its removal (volition), and the efferent or motor nerve directs the muscles of the arm to brush the insect away. There is not always, however, a good telegraphic understanding between the filaments of a nerve. A woman has dropped her baby and a gentleman his snuff-box, from mere inattention to the object they were holding. On the contrary, pain may be excited by our mere thinking on it, and “by seeming-gay we grow to what we seem.”

This intercommunication between sense and organ is of the deepest import regarding mental science. The most simple and remote irritation may, without even consciousness or sensation, induce intense mental derangement. A boy was struck with the most furious mania from a tiny splinter of glass broken into his foot, inducing scarcely any local pain. The paroxysm, however, instantly subsided on the removal of the glass, and the mind became perfectly calm and quiescent. The sensations of thrill, throb, pang, flush, are common illustrations of this sympathy, involving, indeed, the secret of Emotion—the feeling of thought in the flesh. Even the most tender sentiment may be thus displayed. The poet was physiologically true who wrote,

"You might almost believe her body thought," in alluding to the blush mantling over the cheek and neck and bosom of beauty. When sentiment is heightened into emotion it involves the most extensive organic action; and when it is intensified into passion, the sympathy of the whole nervous system. Thus true love, in its first degree, is a pure sentiment; when the sensitive is fairly blended with the animal, it becomes emotion; when the animal is predominant, it is darkened into passion. We may be often conscious of the electric current of this emotional sympathy, as it flashes down the neck along the nervous cords that inosculate with the meshes of the great sympathetic in their course to the lung, the heart, and the stomach, inducing panting and oppression, the lung almost forgetting to breathe, the heart becoming feeble or tremulous. A *broken heart*, indeed, is not a mere poetic fiction. It is the acute *reaction*, however, on the brain, of the heart and lung, and especially the chronic influence of the stomach, that are of high interest in this discussion, deranging the intellect in the various degrees of depression and excitement, melancholy illusion, frenzy. It was dyspepsia—for which Melanchthon urged him to consult the doctors at Erfurth—that incessantly haunted Luther with the phantom of the devil at his writing-desk; and I may remind you of the intense spectral illusion of Nicolai, the bookseller of Berlin, after every meal, until digestion was complete. I might cite also the cases of many of our own patients, who were exalted "from grave to gay" in a moment, as the ingesta passed the *pylorus*. You may perchance remember the story of Voltaire. He had agreed with a friend that on the morrow morning they should die together by their own hands. At day-break, however, the friend received a billet from the cynic, stating that he had changed his mind; his lavement had acted beautifully, and his friend would oblige him by taking the leap in the dark by himself. The stomach may, indeed, decide many a mighty issue, even eclipse the glory of a nation. It was the remark of Lord Chesterfield, that many a battle had been lost because the general was labouring under a fit of dyspepsia. Even in the banquet-room we may often smile at the sympathy of stomach with the brain action. A goblet or two of champagne will soon sparkle up the wit; but one glass more, and there lies his lordship. And who does not know how deeply the organ of benevolence dips into the money-purse, when the organ of alimentiveness has been well stuffed out at a charity dinner?

The deeper pathology of nerve tissue I may not now discuss; anæmia; hyperæmia, poison-blood; and wasting and wearing of brain, etc., or I might illustrate many more of the deeper shadows of genius: the illusions of Tasso, Lee, Blake; the frenzy of Burton, Collins, Cowper, Miller, etc. My object, however, has been to submit these crude illustrations of the organism of the encephalon, with which mental phenomena may seem to be associated, as a mere stepping-stone to the future study of intellect.

The thanks of the meeting were given to the author of the paper.
Mr. ATKINSON, to whose book Mr. Dendy had pointedly alluded,
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said that if the author of the paper had carefully read the statement in his book referred to, he would have found its meaning sufficiently explained.* He disagreed from the opinion that impressions or sensations pass into the brain along any nerve at all, but are transmitted direct by an animal magnetic law; but he refrained from entering into a general discussion of the subject, though invited to do so, as his novel views of nervous action require careful illustration to be appreciated.

Mr. BROOKES observed that the several propositions for discussions suggested in the paper, were far too vague, and that the paper treated the topics advanced in a mode that was not scientific, and he felt at a loss to conceive what the propositions were which the author of the paper wished to establish.

Mr. G. HARRIS said, that he thought the thanks of the society were due to the author of the paper; and he (Mr. Harris) must take that opportunity of expressing his satisfaction that mental philosophy had at length been brought directly before the society, considering, as he did, this as the highest branch of anthropology, as it was, indeed, the first of all the sciences. Anthropology might do more for this science than could be effected by any other branch of knowledge; and perhaps anthropology had no higher aim than this. As yet, however, mental science had not assumed that rank in the department of anthropology which its importance warranted. Anthropology revealed to us the union between, and the reciprocal influence of, mind and matter. He (Mr. Harris), however, regretted that the paper just read did not go deeper and more fully into the subject of mental philosophy. The author descended speedily from mind to matter,—from the consideration of the faculties he diverged to that of the nerves, and from the soul he dropped down into the stomach. He (Mr. Harris) hoped much that the subject of mental philosophy would be followed up by other papers. The connexion between mind and matter might be illustrated by facts which the Anthropological Society had contributed largely to supply. Mental science, moreover, was not only the most important, but it was the most practical and the most useful branch of anthropology. It embraced the important and practical topic of memory; as also those of logic, language, and the laws of thought. Anthropology might also render mental science practical, as a pursuit. Leaving it to others to follow the author of the paper through the various points which he had touched upon, he (Mr. Harris) should content himself with merely urging upon the society increased attention to topics connected with mental philosophy.

Dr. DONOVAN did not think it judicious to drag phrenology into the subject, for mental science should be considered apart from its phrenological questions and applications. He considered the study of the mind to be the commencement—the alphabet, in short—of anthropology, but the author had said nothing about it in his paper. From its title, it might have been assumed that the author would have attempted to analyse the intellect, but it was not analysed at all. He entered into some

* Letters to Harriet Martineau, p. 73, 84, 107.

examination of the brain, but not of the intellect. Dr. Spurzheim had been accused of fanciful speculations, but no accusation could be more unjust. Any fancies he might have had were distinct from his science ; for in his investigations he was led by inductive reasoning step by step, following closely his great leader, Dr. Gall. He considered the assertions and reasonings in the paper to be a confused mixture about the brain and intellectual faculties, but he hoped something would come out of it, and that it would lead to a more complete and satisfactory examination of the science of mind, which was the true object of anthropology, for it was the real science of man. He hoped the Society would investigate the subject thoroughly. They would have the aid of various writers in pursuing that object, and he trusted that the result of their labours would be that man would really come to know something about himself.

The Rev. DUNBAR HEATH thought the paper had not received due appreciation. The subject of it was not the anatomy of the intellect, as Dr. Donovan had supposed, for that would involve the assumption that the intellect has an anatomy. The subject was not the anatomy of the intellect, but intellectual physiology, meaning thereby the knowledge of that portion of the human body connected with intellectual phenomena. There might thus be an anatomy of intellectual physiology, though not of the intellect. In point of fact, however, was there a physiology, or a building up of original matter and forces, which, where united, in certain forms, produced a certain kind of action called intellectual? If there be a physiology at all, there must be an anatomy of it. The author of the paper said that emotion is a feeling of thought apparently in the flesh, and this could be connected with physiology. A blush, for instance, is something of the mental part of us showing itself in the flesh. Then the author of the paper spoke of an idea lying in abeyance for a number of years in the cerebral cells. That was an awful theory. It supposed the possibility of memory, connected with some portion of the cerebral mass, being in abeyance for seventy years, and that when we remember the idea, that portion of the brain which had been in abeyance is recalled into action. That, again, involved the question of who are the ones who have remembrance of things so long ago? The paper went right into the middle of that subject, but not in a perfect manner ; it had the great merit of bringing the question forcibly before them. It was a striking statement, that the portions of the brain connected with the organs of sensation, instead of being close to those organs, were situated near the organs of motion at the base of the brain. In reference to that portion of the paper, Mr. Heath alluded to a controversy in the *Pall Mall Gazette* between Professor Huxley and some anonymous writer, respecting the views of modern physiologists as to the action of the brain in man and in the lower animals ; it having been asserted that, according to modern physiologists, the great mass of the brain is alike in all, but that there is in man a cerebral distinction separating the organs into a brain above the brain, but Professor Huxley had denied that to be the received opinion. There was some similarity between that opinion and the views the author of the paper had set

before them. He commenced about the soul, a pre-existing controlling mind governing matter, and asserted that there is a soul and a power existing without phenomena; that there is, in short, a spirit existing without bodily action. There was, however, no evidence of such existence, and all that could be said of it was that it may be.

Dr. KING thought there was one point which had been left out of consideration by the author of the paper, which was of great importance, viz., that it is the quality and not the quantity of the brain which determines the amount of the intellectual faculties. He alluded to the skulls of several distinguished individuals—to those of Cuvier and Napoleon Bonaparte in particular, the latter of whom was supposed to have the smallest skull and brain known. [Several members having contradicted that opinion, the cast of the skull of Napoleon was produced from the museum to show that the frontal development of the head was large.] There were several similar instances with regard to the development of the muscles; for many remarkably strong men had comparatively small muscular development, it being the quality and not the quantity that produced muscular power. This, he said, was often exemplified in pugilists. He mentioned also the fact that men who have lost both testicles frequently possess great muscular power of action.

Dr. HUNT said he was not then prepared to follow Dr. King into the consideration of the respective values of size and quality as influencing intellectual and muscular power; but with regard to the paper, he regretted to say that it had disappointed him. It was true the author had to deal with a difficult subject, and it was very desirable that that subject should be brought before them, as it was one which had not hitherto received sufficient attention from the society. The first proposition on the paper was one which he thought they must all agree to; but he was startled when the author proceeded to state that it must be admitted that matter was originally endowed with action,—that it possessed some special endowment. He could not admit that proposition. It was mere assumption, and must be regarded as such. He should not attempt to follow the author of the paper into his other propositions, which were based on an assumption which he (Dr. Hunt) could not admit. He considered the treatment of the subject hardly worthy of its great importance; but the paper was very suggestive, and he hoped it would be the means of stimulating others to bring forward something more satisfactory.

Mr. A. L. LEWIS observed, that the fact brought forward by the author of the paper, that the optic nerve is conveyed to the base of the skull, tended to confirm the idea that the seat of the vital principle is at the base of the brain, and that the development of it belongs to the upper portions of the cerebral mass. The fact that it is possible to lose one portion of the brain without loss of the intellectual faculties, showed that the shape of the skull was no indication of mental capacity, and that phrenology must be at fault.

Dr. DOWN, referring to the portion of the paper on which the memory was stated to have been locked up for years in the cells of the brain, said he supposed that, according to Mr. Dendy's theory, the

brain in the course of years undergoes some change, but that a certain portion of it remains for a long period. He adduced an instance of a youth who possessed remarkable power in remembering anything addressed to the optic nerve, whose peculiarly distinct recollection of visible objects ten years afterwards he thought tended to confirm the views of the author of the paper. With regard to Dr. King's opinion, that the quality of the brain was of more importance than the quantity, he mentioned, in confirmation of that opinion, that he had dissected the brains of two boys, one of which was the largest on record, and the other weighed only nine ounces, yet the boy with the smallest brain was more quick and shrewd than the other. Phrenologists, he therefore conceived, committed a mistake in looking to the quantity of the brain and not to its quality.

Dr. DONOVAN denied that phrenologists disregarded the quality of the brain, and attended only to the quantity. It has ever been their practice to consider the quality of the brain especially. They have thrown more light upon temperaments than any other class of investigators; and if there be one question more than another to which they have directed their attention, it is that of temperament. There was another point on which he wished to make a remark. It was a general error, that men who have received injury of the brain often retain the full use of their faculties, and a remarkable instance of the kind was stated in the paper. But he denied the correctness of all such statements. The merchant alluded to might have retained a certain degree of consciousness, but he would be unable to transact his usual business, and did not make the attempt; and it might as well be said that a man with a broken leg was able to walk, because he had all his muscles. He denied, indeed, that any sick man retained the full use of his faculties.

Dr. DOWN observed that phrenologists ought to state the respective values of the quantity and quality of the brain in the respective organs. He had formerly been a believer in phrenology, and he commenced a work which he hoped would have established it on a firmer basis, but he had, in the course of his inquiries, been induced to take entirely opposite views; and he contended that no measurement of the skull could denote the quality of the brain.

Mr. H. BROOKES said, the state of the physiology of the brain twenty-five years ago was admitted to be a disgrace and a shame to the medical profession, and it was so still. Gall and Spurzheim made certain propositions, and they challenged the examination of them; yet now it was stated that there is no proof that the brain is the organ of the mind, or that it has anything to do with it. He alluded, as an instance of the avowed state of ignorance of this subject, to a recent case in a court of law. In order to prove the incompetency of a testator to make a will, evidence was adduced of the diseased state of his brain, and of the thickening of the skull of the deceased; but the judges said there was no evidence to satisfy them that the state of the brain had anything to do with the state of the mind; and that evidence of a diseased skull did not prove mental insanity. Such a state of ignorance was a disgrace to anatomists,

who went on year after year dissecting the brain without doing anything. It was most desirable to ascertain the phenomena of mind, and whether they had any relation to, or were dependent on, the state of the brain. The first question to be determined was, is the brain at all connected with the manifestations of mind? and if so, then would come the question, what parts of the brain are brought into action in different states of mental excitement? It was most important that the subject should be investigated, and that phrenologists should be compelled to produce the proofs of the positions they had arrived at. They should prove that mental phenomena are dependent on the brain; and that special manifestations of mind are connected with separate and distinct parts of the brain.

Mr. McGRIGOR ALLAN made some remarks on that part of the paper in which the author stated that the heads of criminals he had examined, did not indicate the possession of the propensities which led to their crimes; and also, that the skulls of young girls were generally smooth and round, without any marked phrenological developments. If that were so, phrenologists would find it difficult to account for the number of infanticides which were committed by young women. In his opinion, differences in character are dependent on differences in the convolutions of the brain; and he adduced three instances, from his own observation, of great differences in the convolutions,—one of the cases being that of the skull of an orang-utan. He thought, therefore, that the shape of the skull was not nearly so much an indication of intellect as the quality of the brain. The author of the paper inclined to the opinion that mind is the result of material organisation, and he was disposed to take the same view; for how could mind be said to govern matter, when it is known that the drinking of a glass of wine too much will turn a wise man into a fool?

Mr. BENSON conceived that, in the discussion on the paper, many of the speakers had argued from the wrong end. He considered that if the phenomena of the mind constituted a science, the opinions of those who had had the opportunity of making the greatest number of inductions were well deserving consideration; and the assertions of phrenologists of the results of their experience were consequently of great importance, and were sufficient to place craniology in a favourable position as a science. It was at least equally so as the science of medicine; for in nine cases out of ten medical men could not tell what effect certain medicines would have on certain constitutions. The statement of Dr. King respecting eunuchs showed that the brain is the source of nervous power, and the muscular action would not have occurred had the organ of amateness been destroyed. He contended that craniology is an inductive science, which ought to be more extensively cultivated.

Dr. DONOVAN recalled attention to the subject immediately under discussion, which, he said, was not a question of skulls and brains, but the mental system of man, and that it should be the object of the society to ascertain what man is, mentally considered.

Dr. HUNT said it was the duty of anthropologists to study the

functions of the brain. The observation of facts was an important point in the science of man ; and he greatly approved of Dr. Down's method of observing facts, and taking into consideration the temperament in connexion with the size and quality of the brain, as the true inductive system on which anthropology should be studied.

Mr. DENDY replied to many of the observations on his paper. With regard to Mr. Atkinson, he said that gentleman had contented himself by referring to his book for an explanation of his views, and he had left the society ignorant of his *rationale*. He had read the book, and he still thought the theory there propounded was wrong ; and he (Mr. Dendy) again adduced the passage of the optic nerve from the eye to the base of the skull, remote from the frontal lobes, the seat of the perceptive organs of the craniologist. With respect to Mr. Heath's observation on the improbability of ideas being stored for many years in the connexion with the substance of the brain, he said, that matter was indivisible, the ultimate atoms being never arrived at ; and microphotography had shown that things completely invisible to the naked eye, were yet impressed in all their details. To the objection that had been raised by Dr. Hunt to the term of special endowment, he said he could offer no explanation of the term further than by saying, that in anything which acts there must be power of action, and that inherent power which was exerted by matter he called the special endowment of that matter. He left out of consideration altogether the sources of that endowment, for the discussion of primary causes was out of place in that society. Dr. Donovan had expressed doubt respecting the case of the merchant and others who retained their faculties after mutilation of the cerebrum, the men retaining all their faculties,—intellect, of course, being weak and feeble ; but he assured him that the fact was so. With respect to craniology, he differed on that point entirely from Drs. Gall and Spurzheim, and he considered it to be a complete fallacy unworthy of the science of the present day. He thanked the society for the attention paid to his paper, though he was rather disappointed that the speakers had not hit him harder, his object being the full elucidation of truth. Some of them had misinterpreted his meaning ; for he considered the physiology of the intellect as separate from the mystery of psychology.

The meeting was then adjourned.

DECEMBER 17TH, 1867.

DR. SEEMANN, V.P., IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

R. B. Porter, Esq., C.E., of Lincoln, was elected a Fellow.

The following presents were announced as having been received, and thanks were given to the donors :—

FOR THE LIBRARY.

- From Dr. HARCOURT—Anatomical Plates. Anonymous.
 From the EDITOR—The Medical Press and Circular.
 From THE MANX NATURAL HISTORY SOCIETY—Juan Y. Kelly's
 Manx Dictionary.
 From the EDITOR—The Farmer's Journal, Nov. 30, 1867.
 From the EDITOR—Anales del Museo Publico de Buenos Aires. By
 G. Burmeister, M.D., Ph.D.
 From T. SQUIRE BARRETT, Esq., F.A.S.L. The Chronothermalist, or
 The Forbidden Book, 1850, 2 vols. Captain Drayson, The
 Earth we Inhabit.
 From Professor BOGDANOW—Moscow Archæological, Historical and
 Geological Papers. Catalogue of Anthropological and Archæo-
 logical Objects.
 From W. C. DENDY, Esq., F.A.S.L.—Statistical Notes on the Progress
 of Victoria Colony.

FOR THE MUSEUM.

- From J. MEYER HARRIS, Esq., F.A.S.L. A Quanchee Aboriginal Skull
 from a cave in Teneriffe.

Mr. ROSE exhibited on the table a portion of the large collection of stone implements, weapons, etc., which had for some time been exhibited in the rooms of the society, consisting of over fifteen hundred specimens; and in illustration of these, after detailing the narrative of their discovery, he stated that he had carefully preserved an accurate account of each individual implement, and proceeded to make certain explanations of their characteristics. He had based his remarks upon the works of, and the results of personal conference with, the Danish professors, who of course were much more capable, from long familiarity with the subject, of affording instruction on topics connected with the stone age, than it was possible for a stranger, especially a foreigner, to do. In order to render his explanations as clear as possible, he had adopted a system of classification of the various types of implements as far as his judgment would allow him to do, in the order in which they had been made.

From various geological and other scientific researches, it was found that the earliest period to which, with certainty, the traces of the inhabitants of Denmark can be followed, was "more than three thousand years ago", when the land was described as covered with enormous and almost impenetrable forests, which, however, were more open towards the coasts; and for this reason the wild tribes who wandered to Denmark, chose these parts for their dwelling places, the woods offering them every facility and variety of ground for hunting, the waters and principal streams, running out into the sea, inexhaustible supplies of fish. These had no knowledge of any metal whatever; and all their implements and utensils were of wood, the bones and horns of animals, and of stone; the latter material being of course the most durable, has remained, comparatively speaking,

unchanged to the present day. Of these come first the *Tilhugger Steen*, chipping or hewing stones, with which all other descriptions of tools and implements were wrought. *Raastykker*, being rough, raw pieces,—wedges, axes, etc., etc. First roughly hewn out with the chipping stones, and afterwards ground *upon*, and perhaps with, grinding stones, which were of various descriptions of stone, granite, and other sorts. In order to be as serviceable as possible, they were made of the hardest description of stone, and almost exclusively of flint; they were found ground or polished on all four sides, on the two broad or flat sides, and sometimes only the edges. They are often very sharp, but at the same time, and most frequently, rather thick, which made them stronger, and thus more useful for working in wood. Originally they were believed to have been fastened in shafts; but as these shafts naturally have decayed in the course of centuries, they have never hitherto been found in Denmark. Mr. Rose had seen in the Royal Museum in Copenhagen, or in the Flensborg Museum in the Duchy of Schleswig, the shaft of a lance or harpoon, much broken, but still comparatively in good preservation; it was found in a moor. The shaft was undoubtedly split; but as it would be difficult to hold the axe in them, they were probably fastened, as the natives of many wild tribes use them at the present day by laying a kind of pitch round the stone, and securing it by lashing strips of hide round it. [Here Mr. Rose referred to an illustrative sketch.] These wedges, axes, etc., were used for the following purposes: as the oldest inhabitants of Denmark would not have progressed very well in the event of having to fell large trees with the sole aid of such insufficient tools as these stone axes. They also employed fire in the following manner. With the axe or wedge, a portion of the bark of the tree, and a groove into the stem, was removed, and in the hollow thus made glowing embers were laid, and blown upon as long as they lasted; the charred portion was then removed by the axes, fire again applied in the same manner as before, and this process continued until the stem was severed. As proof of this, in the turf-moors of Denmark, very old trees stems had been found, which appear to have been felled with stone axes by the aid of fire.

Huulmeisler. These wedges or chisels were found in infinite variety, both as to size and form, as well in length as in breadth and thickness; and doubtless the various forms, when used in shafts, have had these again of as many varieties of form as the blades or chisels themselves. Thus, there were the long, broad, flat sort, apparently used without any shaft, but held in the hand: the shorter, broader and thicker, square or blunt-edged sort: the still broader but thinner type; one class with hollowed out sides, then both broad and narrow, thin, flat type. The boats used by these early inhabitants of Denmark were doubtless of a most rude and simple description, as the specimens excavated from the turf-moors plainly proved. Of those from Sattrup Moor and Nydam Moor, in the neighbourhood of Flensborg, in Schleswig, Mr. Rose could speak from experience, having seen them in the Flensborg Museum, already referred to.

From the samples discovered, it might be concluded that the na-

tives, after the usual custom of wild tribes, had simply taken the stem of a tree, and afterwards hollowed it out by the aid of fire, until it was buoyant on water, and to this work assuredly the (so-called Huulmeisler) hollow chisels, or gouges, were applied. They were composed of flint, like the wedges or axes, and only differed from them in so far that the edge was always grooved out hollow in a very careful and plainly defined way.

Smalmeisler.—To the same period belong sundry long, narrow four-cornered flint implements, called smalmeisler, or narrow chisels (almost similar to the cold set chisel used by our smiths, fitters, and mechanics of the present day in steel. The next sort of implement consisted of *Knivene* and Blocks or Cores, knives used both for domestic and working purposes, hewn out of flint, double edged, and with broad blades, but constructed with a handle. These latter were invariably only roughly hewn or chipped, probably because the edges being so thin would have broken away in grinding. Another description of these knives, called half-round or crescent shaped, sometimes made with small teeth, and often called sawblades. This latter sort were often fastened in wooden handles. The original kind of knife was most probably the *flekke*, or flake, struck or split at a single blow from the blocks or cores of flint, many of which bear apparently the marks of use quite plainly.

Hamre.—Besides these tools were the hammers and axes with the shaft holes bored through them; not made of flint, but of tougher descriptions of stone, granite, trap, etc. The boring of these holes was supposed to have been accomplished with a drill, and the aid of water and sand: often and most frequently bored first partly from the one side and then from the other; and finally broken through in the middle. Mr. Rose once saw in the Museum of Northern Antiquities in Copenhagen, a remarkable sample of the boring of a hammer, which had been bored very clearly from the one side *only*, and in the bottom of the hole thus bored a core left standing of about three-fourths of an inch in height, the original centre of the hole; and upon being asked his opinion as to the means used to bore them, he suggested that a hollow bone might have been the drill used in conjunction with sand and water; an opinion which had been very favourably received.

The hammers with the shaft-hole in the middle (of the length) were called hammers; those, on the contrary, with the holes nearer to the edge were usually designated axes, and may have been used as tools in splitting wood, in which they were struck with wooden mallets, but both descriptions in cases of need were supposed also to have served as weapons of war. In some instances hammers of stagshorn had also been discovered with a shaft-hole bored through them near to one end, the other end ground or otherwise made to a sharp edge, a proof how the inhabitants were compelled to "make shift" in the absence of metal.

Landse, og Pile-Spidser, Harpuner, etc.—Among the most delicate and highly wrought specimens of the stone age, the lance-heads, harpoons, and arrow-heads were most conspicuous, the former were most probably used as weapons attached to shafts, either for thrusting or

hurling, the two latter used in the more peaceful, but not less necessary, purposes of securing the means of subsistence, either in fishing or hunting; what spoke very plainly in proof of the latter, was the fact that they were almost exclusively found in the moors, which were universally allowed to be the remains of ancient woods and forests. The exceeding beauty displayed in all of them, but especially in these last, rendered it a matter of wonder and admiration as to how a primitive uncivilised people, ignorant of the use of metal, could ever have produced such exquisitely fine work with the rude and simple means at their disposal.

One may be pardoned for thinking that with the rude bow, and arrows made of thin sticks of wood or reeds, and provided only with a flint point or head, not much game would have been secured, but there were proofs without end of the astounding accuracy with which people of the present day can use such weapons, as, for instance, in the Brazils, where the method of shooting consisted in the natives throwing themselves on the earth on their backs, and drawing the bows with their feet, and were still steady and sure of aim.

Skeeformet, Stykker, Skrabere, etc.—On the use of these two types opinions had been divided, the latter were still supposed to have been used as scrapers in removing the skin from animals; the former are known under their peculiar name on account of their resemblance in shape to primitive spoons. It would readily be believed, that with the acquisition of such a large number of specimens many curious incidents were connected: perhaps of scarcely sufficient interest to warrant a mention of them on the present occasion, while two yet very important, highly interesting and instructive points were still left unmentioned: viz. the localities, and the different depths below the surface in which the various pieces had been discovered: these, the speaker owned, were so diversified as to render it almost an impossibility to particularise, no particular type having been found exclusively in one particular locality or depth; as a rule the speaker thought that Jylland (Jutland) had the reputation of containing the greater number as well as more beautiful samples of all kinds, as also of bronze; on the other hand, the island of Fen had been rich in its contribution of gold to the museum; whether the two places were inhabited by similar or different races at the same time, or whether the inhabitants of either place were in a more advanced stage of civilisation, must, he thought, ever remain a subject of mere conjecture; of the island of Seeland he was not in a position to speak, never having been much located there, and when there, only in the capital.

The Danish professors argued from the vast stores of their antiquities collected from the whole length and breadth of the kingdom, that the various types of weapons and implements from the heathen periods very far back, establish beyond all doubt the fact that there were three distinct periods. 1st. *The Stone Age*, during which, in the entire absence of metal, all weapons, implements, utensils, etc., were made of stone, bone, or wood; 2ndly. *The Bronze Age*, where metal was known and used, especially bronze, but still not yet iron; and 3rdly. *The Iron Age*, where a knowledge of iron and its uses had become established.

It had, however, nowhere been clearly defined whether a term of transition elapsed between the uses of the second and third sort, or when the use and manufacture either of the stone or bronze, was discontinued, and this point also partially remains involved in mystery. The greater number of the examples in the speaker's possession were from the island of Fyen, principally from the centre and southern and western parts: this might be easily accounted for by the fact of his having been stationed at the extreme western end, and therefore his chief cruising ground was in the neighbourhood, for it might here be mentioned that the entire collection had been made under his own personal supervision—many pieces found upon the line of railway—or collected by tried and perfectly trustworthy and reliable agents, principally from the farmers and landowners; thus many were found in ploughing and cultivating the land, many had been given to him by personal friends and acquaintances, not a few were found by himself, and only three pieces in the whole collection of between 1,400 and 1,500 pieces having been purchased of dealers in curiosities and antiquities—a doubtful source, of which he had always had a reverend horror.

The thanks of the society having been given to Mr. Rose,

The CHAIRMAN said, that as Colonel Lane Fox had promised to give an account of the flint implements he had collected, it would be better to hear it before proceeding to the discussion of the subject.

Colonel Fox then proceeded to make some comments upon the collection of Mr. Rose, and referred at some length to various objects on the table, alluding to the close resemblance which existed between certain Danish and Irish forms of these flint implements. He also laid before the society a number of specimens of flint implements which he had found in certain ancient entrenchments in Sussex, extending, within sight of each other, through the county. The place where the greatest number of these rude implements were found was at Cissbury; and at one place had discovered a bronze dagger of remarkable construction. The animal remains associated with these implements were the bones of the *bos longifrons*. The different characters of the implements found at Cissbury and at Highdown were supposed to prove that they belonged to two distinct periods.

The thanks of the society were voted to Colonel Fox for his interesting communication.

Dr. BELL referred to the large collection of stone implements in the Copenhagen Museum; and to the historical account of Denmark by Professor Worsaae, from which he read several extracts, as throwing more light on the implements collected in Denmark by Mr. Rose, and the periods to which they might have belonged. He observed, that there was no trace of a gradual transition from a stone to a bronze age; but there were indications that at an early period a new race of men had entered Denmark, and suddenly changed the character of the implements previously used.

The CHAIRMAN reminded Mr. Rose that all savage tribes do not

make their boats by hollowing out trees. With regard to the period named of 3,000 years, he said, he had entertained the idea that an argument as to the period of the occupation of Denmark might be derived from the name of the country. "Dane", or "Danne", in Low German signified a pine-tree, and "mark", a field or plain; from which it might be inferred that Denmark was covered with pine trees, and hence had been called the country of pines (since been succeeded by oaks and beeches), when the Teutonic tribes made their appearance.

Mr. LEVIEN inquired whether there was anything in the character of the implements that might lead to an idea of their identity with others from which the date of their manufacture might be ascertained. It was deserving of consideration, how objects found in different parts of the continent of Europe resembled each other so much in type.

Mr. HIGGINS bore testimony to the extreme industry of Mr. Rose in making so extensive and typical a collection of stone implements in such a short period as seven years. He also thought that the special thanks of the society were due to Mr. Rose for the careful manner in which the various specimens had been arranged for exhibition. With regard to the paper just read, he (Mr. Higgins) would venture to say that a much greater value would have attached to it if particulars had been given—say in a tabular form—of the nature of the places from which the specimens were derived. He called attention to certain of the implements with saw-like teeth, and said he should be glad to know how Mr. Rose supposed they had been formed. It was the opinion of Professor Hildebrand, the Swedish State-Antiquary, that in the implements of a similar kind in the Stockholm Museum, the teeth had been produced by striking the thin edge with a piece of bone. The method of working the holes in the stones, which had been indicated by Mr. Rose, differed from that which Professor Hildebrand supposed to have been used. Many partly-worked specimens in the Stockholm Museum, in which small cones were left in the middle of the hole, seemed to indicate that the holes were formed by a stick worked in sand, and retained in position by a thong. With regard to the implements shaped like a shuttle, it had been observed by Professor Nilsson that they had a stroke from right to left upon them, as if produced by sharpening a needle or pin. One of the specimens in Mr. Rose's collection was probably intended for a different purpose, as the two principal surfaces are considerably curved, and are not marked with the usual furrow. With respect to the date of the specimens, he did not believe they belonged to any one period, but that their period extended from a very early one down to an almost recent date. He hoped the Fellows present would give their opinion as to the value of the assumed divisions between the periods when ground and unground weapons were used. The great value attached to the implements by those who used them, was shown by the fact that in several specimens fresh holes had been bored for the attachment of handles, when the first ones had been worn or broken away. In many cases, also, the tools were rechipped and reground so often as to reduce them almost to stumps. Stone weapons, he considered, could give no idea of the races of men by

whom they were made; the only means of determining that point seemed to be the osseous remains of the people themselves. The men of the old stone period in Scandinavia were spoken of by Nilsson, twenty-eight years ago, as Lapps; and the discovery in various parts of Europe of round skulls, of undoubted antiquity, was held to warrant the theory, that the whole of the western part of Europe was inhabited in the earliest times by a people resembling the Lapps. The limbs of these so-called Lapp-like people were, however, long, and indicate a tall people, and not a small race, like the Lapps. He (Mr. Higgins) was inclined to agree with Dr. Thurnam, that they were rather to be attributed to the Finns. With respect to the stone period in Sweden, he observed, that recent evidence showed that the chambered tumuli of that country do not contain solely the remains of round skulled people; on the contrary, the majority of the crania were remarkably similar to the characteristically long skulls found in the chambered tumuli of Gloucestershire and Wiltshire.

Mr. PEACOCK thought the holes in the stone celts might have been made by an instrument like a gouge. He remarked that in several parts of the country the stone celts are now used by the ignorant people as "charms"; and he mentioned an instance in which one of these ancient implements was found concealed under the floor, near the door of a cottage, having been placed there to keep out witches.

The Rev. DUNBAR HEATH said this was a most interesting subject; and he asked Mr. Rose whether the finding of these implements did or did not throw any light on the ordinary chronological theory, that Denmark, more than any other country, supplies a natural chronology in the pine-trees, oaks, and beeches, with which it was successively covered? Was there, in short, any connexion between the rude unpolished stone implements and the pine-tree period, or between the polished instrument and the oak period, the bronze implements belonging to the later period of beeches? When those three periods were spoken of, it was not unnatural to conceive that they were all of equal duration; but there must have been great difference in that respect. There must, for instance, have been a great difference in the length of the geological period, with which the rude stone implements were afterwards associated, and in that of the historical period to which the bronze implements belonged. The "drift" period must have been a thousandfold longer than the bronze period, which was quite modern compared with the stone age. He thought some similarity might be traced, in that respect, to the different periods required for the transmutation of species. As there was a long period of repose in the stone age, so there might have been long periods of permanence in certain species; and afterwards changes of species might have been produced much more suddenly than was generally supposed. So it might have been with the varieties of weapons which had been discovered, to which different periods had been assigned. He asked whether the polished weapons were found at a depth that corresponded with the oak period in Denmark, or whether there was any evidence that the unpolished weapons were situated below the polished ones.

Capt. TUPPER asked Mr. Rose whether, in making his collection, he had met with any bronze implements like the one found at Cissbury.

Mr. DENDY observed that when speaking of the people of Denmark they were speaking of the same people who formerly inhabited Sussex and other parts of England, which was necessarily occupied by Britons, Romans, and other races, therefore it was difficult to ascertain to which of those races any implements found in Sussex had belonged. He thought, indeed, that in many investigations the excavators are liable to become bewildered by finding implements of several periods, which might have been accidentally deposited ; modern skulls and modern implements being sometimes associated with those of more ancient date. Weapons of bone, and flint, and metal, were found intermingled in the mound of Anstilbury, in Surrey. Great caution was therefore required in such investigations, otherwise very erroneous inferences might be drawn from the things discovered.

Mr. BENDIR observed that when the Danes came to England they knew everything about the manufacture of metals, therefore the stone implements found in Sussex would not have belonged to them. No conclusions could properly be drawn respecting such implements unless they were found in numbers, for isolated facts were worth nothing in science.

Mr. DENDY remarked, in explanation, that there had been many previous invasions of the Danes.

Mr. PEACOCK also observed that the Saxon burial urns afforded evidence of there having been a Saxon people living in England before Cæsar's invasion.

Mr. McGRIGOR ALLAN directed Mr. Rose's attention to one of the implements exhibited in the museum, the possible use of which had not been ascertained, and he thought it would be interesting to the meeting if Mr. Rose would make some remarks on it.

Dr. HUNT said the extensive collection of stone implements which Mr. Rose had placed for inspection in the Society's museum was ample evidence of the care, zeal, and attention he had bestowed on the subject, and he had attended day after day to answer any questions respecting them. Mr. Rose was not only a lover of science, but he had shown himself anxious to do all he could to enlighten others respecting the interesting specimens he had kindly submitted to their inspection. The two statements made that evening illustrated each other, for had it not been for the complete series of specimens exhibited by Mr. Rose, many of those shown to them by Col. Fox might have been supposed not to have been the works of man. Near Hastings he had found a collection of flint flakes, which, but for the discovery of similar ones in Denmark, we should not have been able to acknowledge as works of art. It was indeed even still denied by some persons that they were the works of man, and they conceived them to be merely freaks of nature. With regard to the age of the implements it could be only conjecture ; but Mr. Rose had followed other writers in ascribing to them an age of 3,000 years at least. It had been observed

by Mr. Higgins that it would have been more satisfactory if Mr. Rose had stated where he got all the implements; but there were nearly 1,500 of them, and to give an account of them all was not to be done in a day. Allusion had been made to the use of stone celts as charms, and on that point he was able to speak as regarded the Shetland islands at least, where they were frequently used as charms. They were there called thunder-bolts, and when a cow was ill they were applied to it externally.

Mr. HIGGINS said that in Sweden portions of the stone celts are sometimes pounded and given internally to animals suffering from disease.

Mr. ROSE, in reply to the remarks on his paper, said, in the first place, that there could be no doubt of the value of the finished implements to their original possessors, for in some instances the same stone implement had been ground three times for the purpose of giving new edges, when that part of the stone had been broken. With regard to the age of the implements, that was a difficult and delicate question, but he had no doubt that the rough and the polished implements were contemporary. Metal implements had been found, but not frequently, with those of stone, which proved that the stone age did not cease all at once, and he believed that stone and bronze implements continued to be used together for a long time. As to the confusion that might arise from the occasional burial of ancient things in modern times, he admitted that such might occur, and he mentioned the case of the apprentice of a miller who possessed many stone implements which he greatly treasured, and when, in 1864, he was called on to serve as a soldier, he buried them in a box, and had he been killed, the deposit might have been dug up some two hundred years hence, and have led to much confusion among antiquaries. He confirmed the statements that stone celts are sometimes used as charms, and he said that they were so highly valued in Denmark that it was difficult to induce their possessors to sell them, as they were thought to bring good luck to a house. With respect to the locality of the implements, Mr. Rose said that he had written an introduction to his paper which would, to some extent, have explained how and where he became possessed of some of the specimens, but he had omitted it, as it related so much to himself; but he said that with the exception of the first fifty or sixty specimens which he had collected, he could tell where every specimen was found, and how he had got it. The small arrow heads, of which numerous examples were exhibited, were, he said, found at various depths, but seldom lower than three or four feet. With regard to the chipping stones, he thought they had not been used in finishing the tools. He could not agree that the implements shaped like shuttles, and generally called so, had been used for sharpening weapons. He had never seen any of the pointed specimens (like knives, harpoons, etc.) that had been ground towards the point or edge; they had only been chipped. With respect to the implement that had been referred to by Mr. Allan, in his opinion its use was unknown, the traditionary belief being that they were used by the priests in removing the skins from their beasts of sacrifice.

The Rev. DUNBAR HEATH said that on the plains of Marathon he had seen numbers of stone arrow heads similar to those collected in Denmark by Mr. Rose, and he supposed they had been used by the Persian soldiers. There was a large mound there in which they had been buried.

Colonel LANE FOX made some observations in reply to the remarks on his communication. With regard to the identity of form in connection with races, he said that all the implements found in the "drift" were of one type, and different from those he had found in Sussex, which corresponded with those in Mr. Rose's collection. The "drift" implements had a big end and a point, but no cutting edge. The resemblances to which he had drawn attention denoted a similar period, and the implements were of a later age than those found in the "drift." In all parts of the world there were found stone celts of the same form, but in the metal age, distinctions were observed from which identities of race might be traced. Stone shuttles had been found in Ireland of an oval shape, in which there were marks as if produced by sharpening other tools. Stones used for striking off flakes had also been found in Ireland, all of which were alike and bored on both sides until the holes nearly united. With regard to the flint instruments found in the pits in Sussex, he said they were all chipped, but none of them were polished. The pits at Highdown and at Cissbury belonged evidently to different periods. The discovery of the bronze dagger associated with a round skull tended to confirm the opinion expressed by the Rev. Mr. Greenwell and also by Dr. Thurnam, that long skulls are generally associated with stone implements, and bronze implements with short skulls.

The meeting then adjourned.

[The following letter from Mr. Wyatt, of Bedford, who was unfortunately unable to be present at the meeting, was subsequently received by Dr. Hunt, and is printed here in order to complete the subject.—ED. J.A.S.L.]

Bedford, Dec. 19th, 1867.

DEAR DR. HUNT,—I am much disappointed that I cannot attend the proposed discussion at the rooms of the Anthropological Society, but I have already availed myself of the opportunity kindly given by your Council of inspecting the collection of stone weapons and implements exhibited by Mr. Rose, and for this privilege I am very grateful. To any archæological student the collection would be very interesting, but to those who have directed special attention to the relics of the "stone periods," and to the study of the antiquity of the human race, it is peculiarly instructive and valuable. For these reasons one feels anxious to know whether any efforts are being made to secure it in this country, or at any rate as much of it as may comprise good typical specimens of the whole series. The magnitude of the collection gives good evidence of the zeal and industry of Mr. Rose during his long residence in Denmark; it charmed me, however, not so much by the number of specimens, nor by the great beauty of the surface-chipped specimens, but by the illustrative character of some of the

less finished ones. These seem to give instruction as to the progress in the form of implements as well as improvement in the art of fabrication. It appears to me, therefore, most desirable that the society should have a good record of the forms and types, if they are not successful enough to have the collection constantly accessible to their members. It struck me that the chief value of the collection consisted in the manifestation of the progress in the art of construction of fine tools and implements out of stubborn and intractable materials. Some of the Scandinavian types are grossly represented, but there are some groups, scanty in numbers, and less elaborated in their construction, which are exceedingly interesting memorials of the period.

Dr. Hunt.

JAMES WYATT.

DECEMBER 31ST, 1867.

DR. CHARNOCK, V.P., IN THE CHAIR.

THE minutes of the last meeting were read and confirmed.

The election of the following gentlemen, as Fellows, was announced:

Lieutenant C. F. Ellis, Royal Artillery, The Citadel, Plymouth; George Allin, Esq., 14, High Street, St. Albans; James Butler, Esq., 35, Lansdowne Road, Notting Hill; John Miller, Esq., Barrister-at-Law, Madras; William Mason Scharlieb, Esq., Barrister-at-Law, Madras; Dr. Angelo Manzoni of Lugo (Ravenna), Italy, was elected Local Secretary for Lugo.

The following presents were announced as received:—

FOR THE LIBRARY.

From the AUTHOR—The Dialect of Banffshire, by the Rev. Walter Gregor, F.A.S.L.

From the AUTHOR—The Franklin Expedition, by R. King, Esq., M.D., F.A.S.L.

From the SOCIETY—Proceedings of the Royal Society, No. 96, Nov. 1867.

From the COMMITTEE—Catalogue of the Manchester Free Reference Library. Index Catalogue of the Hulme Lending Branch.

The DIRECTOR announced that Charles Harding and Henry Brookes, Esqrs., had been appointed Auditors for 1867.

The DIRECTOR stated that this was a meeting for the reception of Reports from Local Secretaries, and other Fellows of the Society.

The following letter was then read:—

Moscow, 4/16 December, 1867.

SIR,—I greatly regret that an excursion into Finland and Sweden prevented my receiving your letters, and replying to them at the time. I now hasten to send you the Annual Report of our Society; containing also (from pp. 27-36) that of the Anthropological Section,

and to inform you at the same time, that the Imperial Society of "Des Amis de la Nature" has had the satisfaction, at its meeting the 15/27 October, of unanimously electing you a Foreign Associate Member. In rendering this just acknowledgment to your learned labours, and to the indefatigable care you have devoted to the progress and completion of Anthropological science, the Society hopes by this election to consolidate more and more the amicable relations already so firmly established between the Anthropological institutions of London and of Moscow. As to the diploma and official communications, they will be sent to you immediately by the Secretary of the Society, Mr. Alexis Wladirmirsky.

My object in Finland was to gather materials for my study on the Finn race; and I was very agreeably surprised to find, at the University of Helsingfors, an excellent craniological collection, due to the care of Professor Bonsdorff. Thanks to the extreme kindness of that *savant*, I was enabled to render myself familiar with every part of the collection, and to take geometrical outlines of nearly a hundred Finn crania. I have ventured to enrol the name of Prof. Bonsdorff upon the list of candidates fully qualified to seat themselves amongst the members of the Anthropological Society of London.

Once at Helsingfors, I could not refrain from the pleasure of proceeding to Stockholm, where, it may be said, that modern craniology originated. I was not disappointed: the famous collection of Retzius, to the present time one of the most remarkable for its wealth, was immediately and very kindly thrown open to me by Professor von Düben, who is the inspector of it. He himself is at the present time engaged chiefly in measuring and sketching, proposing to publish, in the course of this winter, the first part of an exact and detailed description of the collection of Retzius. Prof. von Düben is already a member of the Paris Anthropological Society, and I may permit myself to recommend him to your special attention for nomination as a Fellow of the Anthropological Society of London.

The younger Retzius has been occupied all the summer in the neighbourhood of Copenhagen, which deprived me of the advantage of making his personal acquaintance. Among the other institutions of Stockholm, the new National Museum most fixed my attention, by its wealth in materials for the study of the pre-historic epochs of northern Europe; it is enough to say, that the various utensils and stone instruments amount to the astonishing number of sixteen thousand. It was there that I was able to familiarise myself with the section of antiquities, thanks to M. Emile Hildebrandt, son of the famous *savant* of that name, at present Antiquary to the Kingdom of Sweden.

To return to myself.—I am at present hastening to complete my memoir on the Finn crania, having the intention of going to Germany in the coming January. In March, I hope to see my honourable friends in London. Our craniological collection does not cease to receive new accessions, even after the closing of the Ethnographical Exposition: I will content myself with naming a series of crania recently received from Siberia. In this respect the Exposition has

been of immense advantage to us : it has shown the public what was required to complete our collections ; and has produced for us a series of new anthropological facts, and new fellow-labourers. The Ethnographical Collections, which have figured at the Exposition, are already placed in the salons of the public museum ; and in January their definitive arrangement is to take place, and the museum opened to visitors.

One result which I regret in my absence in Finland, is that I missed having the pleasure of seeing the Vice-President of your Society, Dr. Charnock, at Moscow, and personally expressing my sincere esteem to him.

I hope that our recent publications, as well as the catalogues of the Exposition, have reached you, having been sent in the spring.

I beg to present you the photographic *carte* of our President, the Emeritus Professor of Geology at the University of Moscow, M. Gregoire Stourofky. He is a personage worthy of the highest esteem, entirely devoted to geological researches, and for that purpose travelling over every part of Russia ; he is, indeed, the third person whom I deem it my duty to designate as a *savant*, well worthy of being associated with the labours of your honourable society.

One of my intimate friends, M. Basile Ochanine, being on the point of going abroad to learn the best mode of establishing a maritime aquarium at Moscow, I trust you and your learned friends will not refuse your counsel, and I charge him with the expression of the profound devotion with which I remain,

Sir, your very obedient servant,

ALEXIS FEDTSCHENKO.

The DIRECTOR remarked that this was a very important communication, affording a variety of facts respecting the progress of Anthropology in Moscow, and the researches of Prof. Fedtschenko in the museums of Scandinavia. He would call upon Mr. Higgins, who had inspected those museums on behalf of the society, to confirm the statement as to the very large number of implements, and whether their character for genuineness was established. Prof. Von Düben had been elected by the Council in advance of the recommendation. There were on the table a series of elaborate works presented by the Moscow Society, of which, perhaps, the Chairman, as a student of Russian literature, might give the society an epitome.

The CHAIRMAN said he was not in a position to do so, as he had not had an opportunity of examining the works.

Mr. HIGGINS remarked, that it was a matter of regret that the work was not published in a language more familiar to European students in general ; judging by the illustrations, the researches seemed to be of great value. The comparative anthropology of the Finn race had been denominated by Prof. Retzius the most complicated problem of European ethnography. There were twenty-four Finn skulls at Stockholm, and others, he did not precisely remember the number, at Helsingfors. Prof. Bonsdorff furnished Retzius with some of these skulls. As to the flint implements in the National Museum at Stockholm, from a general impression he should think there were at least

16,000, and there was no reason to suspect their authenticity. The Finns were especially interesting, from their presumed connexion with the brachycephalic populations of Europe; the historical evidence, though defective, seemed to show that they extended much further than at present.

The following letter was read from Mr. Murray, of Sydney:—

Sydney, New South Wales, April 20, 1867.

SIR,—Observing a notice of some “Ancient British Sculptured Rocks” in the third volume of the *Anthropological Review*, 1865, p. 293, it has occurred to me that there is some similarity between the figures given therein, and those which appear on an “aboriginal tomb tablet” which has been sent from this colony to the Paris Exhibition. I have had no opportunity of comparing them, as the volume I refer to has only just reached me, and I speak merely from recollection of the carvings on the tablet; but it occurs to me that the matter may not be unworthy of attention on the part of the Anthropological Society, and I trust you will, in consequence, pardon me for intruding upon you. The tablet is marked as No. 428 in the Catalogue of our exhibits, a copy of which I send you. The sculptures, I observe, are supposed to be of pre-historic antiquity, and of sepulchral character; and if the similarity exists, it will be interesting to contemplate in it another instance of man’s disposition, all over the world, to act under like circumstances in a like manner. It is possible that the social condition of the sculptors of those remote ages may not have been much in advance of that of the Australian aborigines of the present day. It has been a practice among the latter to place inscriptions, or rather rude marks, on trees in memory of the dead who were buried near: I have known it in many cases.

I also observed in a former volume of the same *Review*, that a question has been raised in your society as to the fecundity of Australian half-castes. Count Strzelecki, author of *A Physical Description of New South Wales*, was the first to raise a doubt upon this subject. But my experience, extending over very many years, leads me to believe that these people would, under equally favourable circumstances, be as prolific as any others. Count Strzelecki says, that the Australian aboriginal female will not bear a child to an aboriginal black man after having had one by a white man. I have, however, known nothing, in a long course of observation of the native races, to warrant this opinion; on the contrary, I have seen several black children who were born after their mothers had had children by white men. Nor does the race deteriorate by the cross. Among the half-castes may be seen as fine models of the human form as any that are commonly to be met with in the colony. That they are not more numerous is not the result of any inherent infirmity in themselves; it proceeds from other causes incident to their peculiar condition in life. The old blacks in the southern districts of New South Wales, and I believe throughout the colony,—although for this I cannot vouch from my own knowledge,—used, up to a certain period, systematically to destroy all the half-caste boys as they approached the

age of puberty. In 1839, I had occasion, as a magistrate, to investigate a case of this kind on the Murrumbidgee river, in the county of Murray. The blacks had assembled in the neighbourhood in large numbers,—they had *corroborees*,—several half-caste boys were seen with them; they retired for a few days to a rugged, hilly, lonely country some few miles off; they returned, after an absence of some days, without these half-caste boys. A stockman gave me information, on oath, to the effect that he had come across their bodies burning in a bough-yard, which the assembled tribes had made near their late encampment; that there were eleven fires burning, and one body in each. I went the same evening to see whether any of the boys had been spared, but could find none. I asked several of the men, whom I knew well, what had become of them, but could get no information from them. I went next day with a party of police to examine the locality where it was stated these murders had taken place. We found a rude square enclosure, roughly made with boughs, and within it eleven separate heaps of ashes, each containing burned, or the remnants of burned, human bones. I did all in my power to prosecute the case to the utmost, but could procure no evidence inculpating any particular individuals. The case thus broke down; but the blacks, hearing of the investigation which was taking place, fled to the mountains, and did not return to that part of the country for fully two years.

These practices may account, in part at all events, for the paucity of half-caste men in the colony. Several are to be met with who in early youth attached themselves to the stations of the settlers, and remain in their service as stockmen or horse-breakers. I never saw an adult half-caste man living in their ordinary state with the aborigines. Half-caste women are commonly to be seen among them, but they too are subject to the destructive influences which are gradually exterminating the “autochthones” of Australia.

I endeavoured, after the incidents just related, to ascertain why the blacks destroyed half-caste boys; but all I could learn was that fears were entertained of their superior influence when they would have grown to manhood. A woman who had lost a well-grown son on this occasion—he was one of the eleven—was in great grief, and exclaimed to me several times, “Cawbawn me sorry massa, cawbawn me sorry; black-fellow always like that—black-fellow always like that.” This woman had then with her a black child, a pure aboriginal, which she bore subsequently to the birth of the half-caste she had lost.

But notwithstanding such cases as this, namely the destruction of the half-caste boys when they reach the age of puberty—and others indicating a cruel disposition, I cannot regard the Australian aborigines otherwise than as naturally a mild, gentle, affectionate, kind-hearted race. I could tell many a story within my own experience in illustration of the correctness of this opinion. In cases of public note I need but refer to the conduct of the wild tribes Captain Sturt met on his voyage down the Murrumbidgee in 1828; to that of Jacky Jacky towards poor Kennedy in 1848; and to the treatment of Mr. King, the sole survivor of Bourke’s party in 1860:—“They appeared

to feel great compassion for me when they understood that I was alone on the creek, and gave me plenty to eat. * * * They were very anxious, however, to know where Mr. Burke lay, and one day when we were fishing in the water-holes close by, I took them to the spot. On seeing his remains the whole party wept bitterly, and covered them with bushes. After this they were much kinder to me than before." —(*Vide King's narrative.*)

I have known a son kill his father, and the circumstance was referred to at the time as a convincing proof of the natural and innate ferocity of the Australian savage. The case occurred fully a quarter of a century ago, but I did not then regard it in this light, nor do I now. The Australian aboriginal soon "melts into sorrow," soon "maddens to crime." When a man of any note among them is killed by the enemy, great is the grief, the humiliation, the mortification, of the tribe he belonged to, and great the triumph and the rejoicing of the enemy. In this case "Billatee," the father, was a very old man; he had been a great warrior, and many had fallen by his hand; his enemies had vowed his death, and he had had some very narrow escapes—one then very recently. His son "Timati" was always kind and attentive to the old man—he was himself one of the most prominent men in the tribe. His father's infirmities were increasing daily; he was in constant anxiety lest their enemies should succeed, and enjoy the great triumph of killing him, and to prevent it, killed him himself. The feeling which led him to this was akin to that attributed to the dying Douglas in the ballad—

"Earl Percy sees my fall."

His sole object was to prevent his falling a victim to his enemies. But the tribe did not understand such casuistry. The "lex talionis" is their law. They formed a great hunting party a few days after for the purpose of spearing him, and they did spear him.

Nor have the aborigines in their collisions with the colonists been one whit more cruel than the colonists have been to them on the outstations. It is a sad day for the savage when he comes in contact with the "outsiders" of our civilisation; and in this respect Australia has many a dark tale to tell.

Nor can I, after ample observation during a period of fully five-and-thirty years, regard the aborigines as by any means so low in the scale of intelligence as they are generally represented to be. I have lately seen, in the *Morning Post* of the 13th of February, a statement by Mr. Crawford to the effect that they are different from and inferior to all other races of mankind. If this is the case, all other races of mankind must be more highly endowed than I, for one, ever thought they were. Mr. Carlyle says her Majesty's subjects, who are spread all over the world, and include every race, "consist of so many millions, mostly fools." Mr. Carlyle is a very profound thinker.

A friend of mine, in my presence, once addressed an aboriginal in English, but the latter did not understand him. "Ah," said my friend, "you are a stupid fellow." "Well," said the black, "why do you not speak to me in my own language." He then addressed the gentleman in the aboriginal tongue, and as he did not understand him, retorted,

"Now *you* are a stupid fellow." At a large party, many years ago, at Regentville, the residence of Sir John Jamieson, about forty miles from Sydney, one of the guests gave a coat to one of the native blacks. He put it on and strutted about in it, apparently regardless of the state of his nether parts, which had no covering. One of the party asked him what his gin would say when she saw him in that fine coat. He answered immediately, "She'll say, what for massa not give it trousers too." I had this from Sir Richard Bourke, then governor, who was present.

Were it not for the length to which this letter has already extended, and my unwillingness to intrude further upon you, I would state some circumstances which induce me to form a very different opinion of the Australian aboriginal from that expressed by Mr. Crawford, but I may have the honour of addressing you on the subject at another time.

The interest I feel in the success of the Anthropological Society must serve as my excuse for addressing you at all. The tombs tablet to which I have referred, and two caps of clay—No. 422 of the catalogue—worn by aboriginal widows in mourning—shall be quite at your service after the exhibition for your society's museum if you should desire at all to have them. I will write on the subject in due time, to Captain Mayne (118 Cannon Street) agent for the government of this colony in London, and a commissioner representing it at the exhibition.

I likewise beg your acceptance of a volume descriptive of the Australian dialects, which has been printed at my instance for the exhibition. Philology ought to form part of anthropological science, and the work for this reason may be of some interest in your society. But my impression is that it can only be interesting in a philological point of view. In the grammatical part there may be much that is questionable. I have the honour to be, Sir, very faithfully yours,

Dr. James Hunt, F.S.A., F.R.S.L., T. A. MURRAY.
President of the Anthropological Society, etc., etc.

P.S.—Some of the fossils referred to in the enclosed extract from the *Sydney Herald* may be worth careful examination.

The DIRECTOR said that the Council were exceedingly sorry that no earlier opportunity had occurred of communicating this important letter to the Society.

Mr. A. L. LEWIS said that the discovery of the inscribed tablet was one of great importance. It was curious that the inscriptions found on dolmens on the Morbihan were exactly similar to the forms of the tattooings on the New Zealanders; in like manner Dr. Seemann had found inscriptions on Central American monuments similar to those in Northumberland.

Dr. BELL cited some equally curious instances of correlation.

The DIRECTOR said that everyone present must have been deeply interested in the paper. The opinions of Count Strzelecki on superfecundation was a most important point. He had never before heard of the practice of destroying half-caste boys. This was an important

matter for future investigation. As to Mr. Crawford's generalisations, they were obviously worthless after the statements of Mr. Murray, who was unquestionably the more competent judge of the two. It was evident that Mr. Murray took a warm interest in the Society, and would prove one of our most valuable local secretaries.

A report, of which the following is an abstract, was then read by Mr. Groom Napier, Local Secretary for Bristol, upon two unusually gifted Mulatresses:—

Mr. NAPIER thought it desirable to bring these two remarkable cases before the society, as illustrations of the exceptional characteristics of half-breeds. These had enjoyed the benefits of European education, which, in other cases under his notice, had not resulted in useful or elevated characters. The first was a daughter of a white by a pure negress. She was successfully educated, from fourteen years of age to twenty-eight, in Scotland, as a dress and staymaker. She suffered from home sickness, and returned to Tobago, a very exceptional circumstance in negro races, in whom family ties are universally spurned. In this case the very reverse took place; and she faithfully performed to her parent the duties of a daughter and fellow creature. To those who had educated her she ever remained attached and grateful, in this exhibiting some of the few good qualities to be found in the negro race.

In the second case, the mulatress was the product of a white planter through a full black girl. There was considerable intelligence manifested, and the child was educated in England from about her fourth year. Before the age of six she was able to read, and soon after to write. Self-confidence was soon exhibited; and at eight she was sent to school, where she remained at intervals until she was sixteen years of age, and then became a governess. As in other instances of negro peculiarities, music was strongly exhibited; and she is now organist of a parish church, and capable of conducting concerts. The religious sentiments are considerably brought out; and she is extravagant of her pecuniary resources,—a correlation not unfrequently found to exist in such circumstances. A low money-value has hence been assigned to her services, and she has met with little encouragement. Persons inferior to her in everything but colour have been preferred to her, and this in a country where, in the eye of the law, all shades are equally blended.

Her mind, Mr. Napier stated, was not original; her powers of assimilation were great, and there was considerable pride in her disposition, evidently a result of the negro afflatus. Her dignity was of more importance to her than the interests of her best friends. Her conduct exhibited great powers of resistance, and she was very contrary. In features she closely approximated to pure negro.

In contrast to these two instances of noble characters, he would give a few of the reverse from his own notes, which were far more common. A. N., a white planter, had a large coloured family. The eldest son was sent home to England at an early age, and placed in the family of a medical man at Cambridge. He graduated, and afterwards took

a degree in medicine, showing great capacity for languages and science. He was taken into partnership, at the age of twenty-eight, by the surgeon who had brought him up. On finding himself his own master, he entered into dissipated habits, neglected the practice, and at last, after eighteen months trial, his partner had to get rid of him to prevent absolute ruin. He died at thirty, worn out with disease. He was the son of a quadroon. His brothers, C. and M., showing less intelligence, were apprenticed to trades in this country, and hundreds of pounds were spent in establishing them in business when they had received good educations. They dissipated their means, and after having been a burden to their friends for some years, they died miserable or disappeared. Their brother A., having had a European education, was sent back to the West Indies. He might have had a large business as a plumber, and have made a good income; but he was so indolent and irregular in his work that, after many trials, few planters would employ him. Being quiet and inoffensive, he was considered the best of the family.

Of two sisters, who also received good educations, one married a respectable English merchant, and went out to the East Indies. The second married an English officer, but soon eloped, and afterwards led an abandoned life. She was remarkable for beauty.

Two young men, likewise children of quadroons, were sent to England for education. The first, named M., after being carefully educated, was apprenticed to a merchant. He went to the West Indies at the age of twenty-one. He showed good abilities, and some aptitude for business, and being prudent and anxious to make money, he went on steadily. He made a successful marriage, and after a while retired with a fair income. His character, although frequently quoted among his acquaintances as that of a model coloured man, does not appear to much advantage when contrasted with any but the most inferior Europeans. He is vain and proud; passionately addicted to display and frippery, having the manners of a French hairdresser or man-milliner,—shallow in thought, and low in his moral standard, but with sufficient prudence to prevent him from outraging the usages of society. Like coloured men in general, he is more than half a woman, without the tenderness and chasteness which become the better examples of European females. Coloured women, on the contrary, have the strong passions which in Europe are characteristic of the male sex, with an amount of tact and cunning not often seen in the Teutonic race.

The other example of a respectable coloured man who received a European education, in the first outset of his career forged an acceptance and decamped, leaving his father and family in great distress. He had inspired much confidence, and had every prospect of attaining wealth and honour; for he was treated as a son. Enlisting in the army as a private, he distinguished himself for his bravery, and returned at last, crowned with honours, to marry an heiress, and settle down into an idle and useless member of society.

He had collected about forty instances of coloured people, whose histories he had known or ascertained, who received every advantage

of good European educations. Of men, there were not more than one out of thirteen who really could be called creditable members of society. But of twenty-nine women, eleven might be considered tolerable, and two exemplary; but the remainder were loose characters.

The moral characters of coloured persons are so weak, that even great advantages of good example, and every inducement of interest, are insufficient to maintain them in a straight course. With women, this is less seen: they are not so much called on to act for themselves; manliness is not required, and they are more completely under the thumb of society, add to which, they are more acute and spirited than their brothers.

He would give one more instance of the false pride of the coloured race. A mother, possessed of good means, sent her illegitimate daughter to England for education, and when this was accomplished, came to England to fetch her. The daughter would not speak to her, which so affected the poor mother that she was half-witted ever afterwards.

Knowing that the Hon. James Kirk, of Tobago, had resided there forty-two years, and is a careful and practical naturalist, he asked him some questions about these people, and received the following answers. He said that mulattoes and mulatresses less frequently cohabited, from motives of pride or convenience, than with either of the paternal races, and that the number of children proceeding therefrom was smaller; but that they were perfectly fertile among themselves, and laughed at the idea of their becoming extinct from lack of fecundity. He thought the moral character of mulattoes inferior to that of either black or white races; for he had a very bad opinion of the morals of all West Indian coloured people. Thus, a man might be convicted of a notorious crime, and be imprisoned for years, and on his release be received into society with acclamation. He thought that some negroes were capable of acquiring a great amount of knowledge; but even the most intelligent were prone to use their learning for unworthy purposes, such as imitating the handwriting of a kind master for the purpose of fraud. Mr. Keans, the Master in Chancery for the Island of Tobago, gave him the same information. A low state of morality was apt to prevail especially amongst the Dissenters, even when very zealous in the promulgation of their creed, and liberal in the support of their ministers, or in contributing to the building of chapels; for instance, several black brothers preferred their neighbours' wives to their own. The black and coloured people of Tobago have been mostly peaceably disposed; the few insurrections known having been induced from Barbadoes or other neighbouring islands. A plot was discovered in due time, some years ago, which had for its object the massacre of the adult male white population, and the appropriation, by lottery, of the white females among the blacks. Mr. Kirk considered the negro but a savage,—a friend when excited, and little to be depended on even in his best moments. He thought men of the Governor Eyre stamp could alone successfully deal with negroes in revolt. He mentioned, however, in extenuation of the negro character, that his own overseer, in whom he has had great confidence for many years, was a pure negro. Mr. Kirk gave him an account of

a family of pure negro blood which contained two albinos (males), one of whom, marrying a negress, had a family of children, but no albinos.

The DIRECTOR remarked, that statements concerning the intellectuality of the negro were made very coolly now-a-days. The principal uses to which half-castes applied their superior knowledge was forgery. Such a statement respecting the negro was received, some years ago, with loud hisses. The paper itself took a very great range, and would become very useful for reference. The information obtained from Dr. Kirk was exceedingly important; and by a careful collection of such facts, we should gradually get to know something definite, not only of pure races, but of half-castes.

The Rev. DUNBAR I. HEATH said:—In all these cases, remember, it is not the character of individuals you have to deal with. Here and there you have a Newton, a Champollion: such instances are not characteristic of the race. Here and there, in like manner, you have a clever black man; but he is not the race. It is the coordination of the whole, that elevates the race. There are and there may be thousands of heroes, saints, and intellectual giants, who are kept from any useful result by the dead level around them. This dead level could only be altered by special personal exertions, and thus individualism constituted an element of civilisation; but this is not typical. There are vast numbers of intelligent animals; but in every case they commenced *de novo*, and the race was not universally brought to a higher level. Mere instances of individuality were not sufficient to warrant general conclusions.

Mr. WALTER C. DENDY corroborated the observations of the Rev. Dunbar Heath. Some years ago, with the late Dr. Hodgkin, he heard a paper, by a negro, on the "Anatomy and Physiology of the Negro," who mentioned some instances of coloured people of great endowments. But upon inquiring into the physical development of those individuals, he found that there was no prognathousness, and a good cranial development. The cases mentioned by Mr. Napier were exceptions, like Dr. Crowther, and could not be generally characteristic of the whole race. Individuals of great mental endowments could not be considered as forming any rule in regard to race.

Mr. GROOM NAPIER, in replying, said, that he had brought these cases forward as singular, if not unique. He did not consider them typical of the race, but exactly the reverse. The negro was deficient in the power of combining socially or politically; and therefore was not likely ever to be raised even to the level of the lowest of the European races.

The following letter from M. Dupont was then read.

Dinant, 21 Sept., 1867.

MY DEAR BLAKE,—Many thanks for sending me a copy of your paper on the "*Naulette Jaw*". It has interested me extremely, and I consider it the most complete that has yet been written.

You have perfectly established the analogies between the jaw and those of existing races, which had not yet been done; for you must

have seen that critics had endeavoured to base an argument thereupon for or against the pithecoïd doctrines.

I must show you the last results of my excavations. You recollect, no doubt, the excursion we made to Pont-à-Lesse, in order to obtain the necessary permission to excavate in the beautiful cavern called Le Trou Magrite. After two years petitioning, I at last obtained this authorisation, and I have good ground for congratulation.

The first and second bone layer contained an enormous abundance of rhinoceros, hyæna, lion, and mammoth bones ; with flint weapons. And these are the types found at Moustier and St. Acheul. The third layer has only yielded an enormous quantity of knives (*couteaux*), many remains of reindeer and horse, but few remains of extinct species. It is in the midst of these *débris* that I found reindeer horn, bearing both an engraving and a statuette made also of reindeer horn. The style of these specimens of art is the same as that found in Périgord. Thus you see how similar the fauna and art are in the two countries. I have no longer any doubt that the period of the reindeer of Chaleux and Turfooz is more recent (*plus jeune*), than that of these objects of art. That is evident, and therefore I believe that this period of the reindeer has not yet been often met with in France. I shall send the publication on this subject very shortly.

I am, etc.,

EDWARD DUPONT.

The Rev. DUNBAR HEATH said that the most interesting result to be attained in pre-historic studies was to get some basis for a chronology. In this some progress has been made. We are getting on. Every fresh discovery differentiates what we knew before, and enables us to recognise eras. He was struck with the results of a science not usually considered a part of anthropology ; by this means we obtained curious and important knowledge. Eminent mathematicians were now bestirring themselves in the matter. Sir William Thomson and Mr. Tate give reasons to show that Chronology begins at least a hundred millions years ago : the surface-temperature was then 7,000 degrees ; the igneous rocks were then just beginning to solidify. That was the beginning of their chronology. Organised matter was not older than this. The problem is now becoming somewhat simplified. We get what we have not had before—a beginning. Turning to the researches of M. Dupont we find two distinct eras,—that of glacial-man and that of reindeer-man. The reindeer-men had made some progress in the arts, as we had a statuette of that period. From Belgium we have a glacial man who killed and ate lions and rhinoceros ; long after this, with an intervening stratum, he lived with the reindeers, made statuettes, used needles and thread, and perhaps invented some sort of a religion. As they had burials they must have had some sort of a religion, no matter what. Next we get Europe covered with men of Tatar origin, with the broadest possible noses and faces. Did they speak Tatar or not ? If so, why is Europe now Aryan ? The results of these inquiries were intensely interesting in every way.

Mr. GROOM NAPIER then read a short account of a Ninevite woman of Mosul, one of the few survivors of that ancient race, her profile

exactly resembling those of many of the Assyrian marbles. On being shown the plate in Hamilton Smith's *Human Species*, she exclaimed, "That's my nose!" with great delight. She died at Bristol in 1865, having been born in Mosul in 1810.

MR. GROOM NAPIER next read an account of some anthropological collections in Bristol.

Several interesting letters from Mr. R. B. N. Walker, Local Secretary for Gaboon, West Africa, were then read. In one of these Mr. Walker says :—

"I must dissent from Mr. Crawford's definition of the negro as a 'human being with the hair of the head and other parts of the body *always* black;' of course it is patent to all that the hair (or wool) of the negro is *generally* black; but, Albinos apart, I have seen many individuals of pure negro blood, and with black or very dark skins, the wool on the head of whom, as well as the eyebrows and eyelashes, have been of a bright red, in fact, what is vulgarly called in England 'carrotty.' But this is not the point to which my attention was more particularly attracted, and on which I am desirous of saying a word or two in correction of misstatements, doubtless unintentional, but calculated, if allowed to pass unchallenged, to mislead those who may not have the means of ascertaining the truth. Mr. M. D. Conway, I doubt not, spoke on the strength of information which he had received, when he said that the 'language of the Gaboon (by which I presume he meant the Mpongwe dialect) a musical idiom could be expressed in native written characters.' Whoever gave Mr. Conway this information was either entirely ignorant of the subject, confounded one tribe with another, or was guilty of making a deliberate false statement. As I have been acquainted with the Gaboon country, and the various tribes inhabiting it, as Mpongwe, Asékani, Akéli, and Ba Fan (or Fans), for the last fifteen years, I am in a position to state positively that no one of those tribes had the slightest conception of an alphabet, or of writing in any shape or form, until they were instructed by the American and French missionaries; nor have any of these tribes, or any individuals amongst them, exhibited that amount of mental capacity which would induce the belief that they were likely to originate such a discovery or invention unaided. Although I hardly conceive it necessary to adduce any authority in support of my assertion, I will quote here a few lines from the introduction to the 'Mpongwe grammar,' compiled by the American missionaries at Gaboon, and published at New York in 1847, under the supervision of the Rev. Dr. J. Leighton Wilson, formerly chief of the Gaboon Mission, and wherein will be found the following. 'The language, until a few years past, has never been written; the people have no idea of the power of letters, and yet all the complicated principles of their grammar have been preserved with unvarying uniformity. They have no traditionary stories from which it could be inferred that they had descended from a people of greater cultivation. * * * And although they have no written literature, they have a great deal in the form of proverbial sayings, fables, and traditionary stories.' In this instance Mr. Conway has probably confounded the Gaboon with the Vey or Vi

country, the inhabitants of the latter having an alphabet of their own invention, consisting of, I believe, some two or three hundred characters. In another statement of his, Mr. Conway has doubtless confounded the Gaboon people with the natives of the Gold Coast, and he was totally in error (or was misreported) in saying that he had 'seen a large collection of gold ornaments made by natives of the Gaboon region,'—the Gaboon people do not possess gold (except in the shape of European coin) nor do they at all understand the method of working that precious metal. I have thought it worth while writing to correct these statements, because going forth to the world as having passed uncontradicted at the meeting of the British Association for the promotion of Science, they are likely to be received as correct and reliable, when in fact they are utterly erroneous, valueless, and directly opposed to the true state of the case. Should you consider my remarks worthy of being made public, you are at liberty to publish them in the manner you may judge most desirable; perhaps the *Athenæum* would be the best medium of making them public. I will in conclusion say a few words touching another assertion of Mr. Conway's, as it is entirely contrary to my own experience. Mr. Conway says that the 'peculiar odour of the negro was only noticeable in those of the race who had much labour to perform, and were not given to frequent ablutions.' I could produce numerous individuals in whom it is undoubtedly a constitutional defect, or whatever the term may be, and entirely independent of avocation or of cleanliness, or its reverse. I know many negroes afflicted with this offensive odour, to whom it is a constant source of annoyance and regret, and who cannot get rid of it or overcome it by the greatest attention to cleanliness; and some of these individuals are not engaged in employment of a laborious nature at all. The Ba Fan seldom or never wash, yet the odour is by no means strong in individuals of that tribe. As to ladies of the Southern States sleeping with their negro maids, that is, I presume, simply a matter of convenience, not of taste, and proves nothing. Sailors sometimes, especially in Africa, take monkeys and other animals for bed-fellows, and certainly the odour of some of these is offensive enough. As far as I have remarked during the long period I have resided in Africa, I have found the odour to exist more or less strongly in almost all negroes; I have known some few in whom I could scarcely detect it—but it varies in degree, according to the constitution of individuals, just as we know that Europeans of certain complexions are affected in a similar manner. In some negroes it is excessively strong and disgusting, so as to render it almost impossible to approach them within several feet."

Mr. DENDY observed that it was a question whether there were any races in which the smell did not exist.

The following abstracts of papers were then read.

Paraná Indians. By Consul HUTCHINSON.

The author commenced by stating that the name given to the great Southern river had not been given by the first discoverers, but

its name, Rio de la Plata was conferred by Sebastian Cabot, on the occasion of his exchanging many articles of silver and gold with the Guarani on its banks, for drugs. The author preferred the grand old Indian name of Paraná. Great opposition was offered to the landing of De Solis by the natives at first, and treachery was employed, the Spaniards being killed and eaten. Sebastian Cabot was the next explorer. On his departure in 1532, he left as governor Don Nuno de Lara, in whose care the colony continued until a furious war, caused by the beauty of a Spanish lady—Lucia Miranda—arose, and the garrison was butchered, and Lucia was burnt.

Mendoza was the next governor, in 1535, and at this time Buenos Ayres was founded, and continual warfare raged, the colony being nearly abandoned. War again took place between the Agaces and Guaranis and the Spaniards, but the latter gradually penetrated to Paraguay, and the Indians received a final check from Don Juan de Garay. He founded Santa Fé, 1573, but was very soon after murdered up the river: in 1651 the capital was finally transferred to its present site. The Indians of this region in all cases showed great ferocity.

Mr. HUTCHINSON, in a communication dated 20th September, 1867, at Rosario, mentioned that he had obtained two memoirs by Dr. Gutierrez, the rector of Buenos Ayres, on the Guarani and Quichua languages, which he proposed to translate for the Society. He also referred to D'Orbigny's book on the American Man, which contained references to the Patagonian and Pampas Indians. He had seen some of the Patagonian Indians of the Tchuélches and Pehuelches tribes dressed in their native costume, the guanaco skins. He forwarded some of their hair, and skulls were promised from the colony in the Chaput county. They were not large, as hitherto reported, but although not giants, their stature and frame was immense. They had likewise expansive foreheads, and their chests were very expanded. Mr. H. was making a collection of Indian photographs, having already accumulated some thirty or forty.

JAMES PERRIN, Esq., Local Secretary for Pietermaritzburg, Natal, writes that no anthropological work has as yet been published in Natal; the population of Natal appeared to be as follows:—Whites, 18,000; Coolies, 5,000; Natives 250,000—263,000 persons. No census has, however, yet been officially taken. The estimate is based upon a calculation of four persons per hut. This does not include the Kafirs belonging to tribes in the vicinity of Delagoa Bay, and those from Amnonpondo County and the Basuto-Mantalees from beyond the Drukenberg Mountains. He submitted a carefully compiled and trustworthy list of the native tribes of Natal, with the names of their head men, 134 in number.

The DIRECTOR, in proposing a vote of thanks to these gentlemen for their several communications, said that perhaps local secretaries at a distance were not all aware that this was an evening set apart for their reports. On the next occasion he trusted the presentation of these reports would be more systematic.

The Rev. DUNBAR HEATH seconded the proposal.

Mr. GROOM NAPIER returned thanks, and the meeting adjourned.

ANNUAL MEETING.

JANUARY 14, 1868.

R. S. CHARNOCK, ESQ., PH.D., F.S.A., VICE-PRESIDENT, IN THE CHAIR.

The minutes of the last meeting were read and confirmed.

The TREASURER submitted the following balance-sheet, which had been passed by the auditors. He congratulated the Society on its prosperous condition; the library and museum had become very valuable, and the copyright of the Society's books was another important asset. He would lay the balance-sheet on the table for the Fellows to see. He had to acknowledge his thanks to the auditors for their assistance.

INCOME AND EXPENDITURE, ANTHROPOLOGICAL SOCIETY OF LONDON,
FOR THE YEAR ENDING 31ST DECEMBER, 1867.

<i>Income.</i>			<i>Expenditure.</i>		
	£	s. d.		£	s. d.
Balance from last year ...	102	12 0	Memoirs	11	2 3
Subscriptions for 1865 ...	10	5 11	Vogt	111	12 3
Do. 1866 ...	59	14 10	Anthropological Review		
Do. 1867 ...	932	16 0	and Journal.....	353	10 6
Do. 1868 ...	6	6 0	Salaries.....	279	10 0
Life Compositions	174	5 6	Postage.....	68	12 10
Sale of Publications—			Stationery	34	17 9
Waitz	5	2 0	Office Expenses	103	16 1
Broca.....	1	5 10	Reader Account balance	20	0 0
Pouchet	2	8 0	Advertisements	27	15 0
Vogt	6	12 7	British Association.....	14	17 6
Blumenbach	4	1 7	Miscellaneous Printing..	4	5 6
Gastaldi	3	16 10	Reporting.....	23	12 6
Office Sales	8	5 0	Rent	130	0 0
Donation to Exploration			Library and Museum.....	24	0 8
Fund.....	10	0 0	Blumenbach (Balance of		
			Printing Account).....	25	0 0
			Manchester Branch	22	12 0
			Balance at		
			Bank	£72	13 1
			Less overpaid		
			Petty Cash	0	5 10
				72	7 3
Total Income	£1327	12 1	Total Expenditure	£1327	12 1

Examined with the books and found correct,

H. BROOKES,
CHARLES HARDING, } *Auditors.*

11th January, 1868.

On the presentation of the balance-sheet,

Dr. HYDE CLARKE rose and made a few general remarks, drawing attention to some of the items; to which

Major OWEN replied on behalf of the Council.

Mr. J. MACGRIGOR ALLAN moved a resolution—"That the balance-sheet presented by the Treasurer be adopted."

Mr. KENNETH R. H. MACKENZIE had great pleasure in seconding this resolution.

The CHAIRMAN put it to the meeting, and it was carried *nemine contradicente*.

The CHAIRMAN appointed Dr. Hyde Clarke and Sir G. Duncan Gibb, Bart., to be Scrutineers to receive the balloting papers. The ballot would remain open for one hour, it being then a quarter to four o'clock.

The SECRETARY then read the Report of the Council as follows :—

Report of the Council of the Anthropological Society of London for the Year 1867.

The Council of the Society in rendering the Annual Report on the progress made by the Society during the year 1867, and in celebrating the Fifth Anniversary of its existence, have great pleasure in stating that the results have been eminently successful, the prosperity of the Society unabated, and that during the year much has been done towards removing from the public mind many prejudices concerning its objects.

Meetings.—During the year 1867 eighteen meetings of the Society have been held—one annual meeting and seventeen ordinary meetings—at which the following papers were read and discussed. A great increase has been observed during the past year in the members attending the ordinary meetings, and many spirited and interesting discussions have taken place.

Papers.—Placed under Dr. Hunt's system of classification the titles of the papers read are as follows :—

GENERAL ANTHROPOLOGY.

C. W. DEVIS, Esq., B.A., F.Z.S., F.A.S.L., V.P.M.A.S., "Report on Anthropology at the British Association, 1867."

ARCHAIC ANTHROPOLOGY.

Dr. DUPONT, Corr. Mem. A.S.L., "Discovery of a Habitation of Man in the Belgian Lehm."

Col. A. LANE FOX, F.S.A., F.A.S.L., F.E.S., "On the Close Resemblance between certain Danish and Irish Forms of Flint Implements."

KENNETH R. H. MACKENZIE, Esq., F.S.A., F.A.S.L., "Notes on a Stone Axe from the Rio Madera, Empire of Brazil."

WILMOT ROSE, Esq., C.E., "On Danish Stone Implements."

C. S. WAKE, Esq., F.A.S.L., "On the Antiquity of Man, and Comparative Geology."

HODDER M. WESTROPP, Esq., F.A.S.L., "On the Sequence of the Phases of Civilisation and Contemporaneous Implements."

HISTORICAL ANTHROPOLOGY.

WILLIAM BELL, Esq., Ph. D., "On the Origin of Language from Interjections, and of our Modern English in the Teutonic and Cognate Dialects."

HYDE CLARKE, Esq., LL.D., F.A.S.L., "On the Topographical Nomenclature of Turkish Asia Minor."

JOSEPH FISHER, Esq., "The Migrations of Mankind."

DESCRIPTIVE ANTHROPOLOGY.

E. B. BOGG, Esq., M.D., "On the Fishing Indians of Vancouver's Island."

Lieut. COLLINSON, "On the Indians of the Mosquito Territory."

EDWARD P. HOUGHTON, Esq., M.D., "On the Land Dyaks of Upper Sarawak, Seulah, Sikoy, Setany and Quop."

C. O. GROOM NAPIER, F.G.S., F.A.S.L., "On the Harmony between Geography and Ethnography."

BABU RAJENDRÁLÁLA MITRA, "On the Gipsies of Bengal."

THOMAS WILKINSON, Esq., F.A.S.L., "On the Natives of Madagascar."

COMPARATIVE ANTHROPOLOGY.

C. CARTER BLAKE, Esq., F.G.S., Hon. F.A.S.L., "On the Condylus Tertius occasionally found in Indian Skulls."

C. CARTER BLAKE, Esq., F.G.S., Hon. F.A.S.L., "On certain Skulls from Round Barrows in Dorsetshire."

J. CLEGHORN, Esq., "Is the Character of the Scotch the Expression of the Soil of Scotland?"

S. PHILLIPS DAY, Esq., M.A., F.A.S.L., "On the Power of Rearing Children among Savage Tribes."

W. C. DENDY, Esq., F.A.S.L., "The Anatomy of Intellect."

JAMES HUNT, Esq., M.D., Ph.D., F.S.A., F.R.S.L., F.A.S.L., "On Physio-Anthropology—its Aim and Method."

C. O. GROOM NAPIER, Esq., F.G.S., F.A.S.L., "On the Proportion that Numbers of the Sexes of Offspring bear to the Ages of Parents."

C. O. GROOM NAPIER, Esq., F.G.S., F.A.S.L., "Table of Human Races classed in accordance with the Moral and Intellectual Characteristics."

C. O. GROOM NAPIER, Esq., F.G.S., F.A.S.L., "Resemblance between Man and Animals."

C. O. GROOM NAPIER, Esq., F.G.S., F.A.S.L., "Classification of Head Forms."

R. W. PAYNE, Esq., F.A.S.L., "On a Bechuana Skull."

JOHN THURNAM, Esq., M.D., F.R.C.P., F.S.A., F.E.S., F.A.S.L., "Further Researches and Observations on the two principal Forms of Ancient British Skulls."

Fellows.—The number of Fellows of the Society has been steadily increasing during the past year, the new admissions more than counterbalancing the losses by withdrawals and deaths, 152 having been elected.

Honorary Fellows.—Six Honorary Fellows have been elected during the past year, as follows: C. Carter Blake, Esq., F.G.S.; Prof. Bogdanow, Founder and President of the Anthropological Society of Moscow; Dr. E. Dally, Paris; Prof. Von Düben, Stockholm; Prof. E. Ecker, Freiburg, Switzerland; Prof. Schaaffhausen, Bonn.

The Council have to announce, with sorrow, the deaths of Sir William

Lawrence, Bart., Dr. Boudin, of Paris, Dr. Richard Haughton, of Ramsgate, and Dr. J. C. Nott, of Mobile, U.S., during the same period.

Corresponding Members.—The number of corresponding members has been augmented by three, as follows: Samuel F. Haven, Esq., Worcester, Mass., U.S.; Dr. Delgado Jugo, Madrid, Spain; Jeffries Wyman, Esq., Boston, U.S.

Local Secretaries (Great Britain and Ireland).—The following additional Local Secretaries in Great Britain and Ireland have been appointed in 1867: William Battye, Esq., M.R.C.S., F.A.S.L., Plymouth; John Grattan, Esq., M.R.C.S., F.S.A.L., Belfast; C. O. Groom Napier, Esq., F.G.S., F.A.S.L., Bristol; Edward Wood, Esq., F.G.S., Richmond, Yorkshire.

Local Secretaries (Abroad).—Twenty-three additional Local Secretaries in various parts of the world have been appointed by your Council during the past year, as follows: W. L. Distant, Esq., Penang; C. W. Hayland, Esq., Constantinople; M. H. Henry, M.D., New York, U.S.; Professor Hildebrandt, Stockholm; A. R. Houghton, Esq., Saráwak; Dr. Kalmus, Brönn; G. Kasimates, Esq., Hermonopolis; M. Lelorraine, Marne; Dr. Angelo Manzoni, Lugo, Ravenna, Italy; James McCraith, Esq., M.D., F.R.C.S., Smyrna; David Nutt, Esq., M.D., Punjab; Dr. Pospuli, Constantinople; Dr. Sutherland, Port Natal; J. S. Taylor, Esq., Erzeroom; Prof. Arminius Vambéry, Pesth; Don Julius Vizcaronda, Madrid; Dr. Von Hahn, Syra; James Waring, Esq., M.D., Savannah, Georgia, U.S.; Stephen Webb, Esq., M.D., Jubbulpore; Rev. T. W. Webb, Barbadoes; H. G. Williams, Esq., C.E., F.A.S.L., Ceará; E. Percival Wright, Esq., M.D., Seychelle Islands; Dr. Zohrab, Broussa.

Local Secretaries' Reports.—In future it is proposed to devote one or more evenings to the reading and discussion of the Reports of the Local Secretaries of the Society. It is proposed that these evenings should be the last before the Anniversary, and it is especially urged on the local secretaries to make up their reports at the beginning of the Winter Session of the Society, so that they may arrive in London in time for reading. The Director of the Society is now preparing a form for local secretaries to fill up annually, and the Council anticipate great advantages to the Society, from a regular return of work done by its various officers. The Council would also recommend that the local secretaries of the Society be entitled to style themselves Honorary Secretaries of the Anthropological Society of London for the districts to which they are appointed.

Travelling Secretaries.—The Council have had under their consideration a proposition for the appointment of Travelling Secretaries in connection with the Society, and beg to recommend for the adoption of the Society the following regulations under which such appointments should be made:—

1. On the notification to the Council or Director of the intention of any Fellow to proceed on a voyage abroad, the Council may, if they should see fit, grant to such Fellow a diploma as Travelling Secretary of the Society, signed by the President or Director for the time being, accrediting him to such local or corresponding secretaries as he may meet during such voyage.

ii. That such diploma shall be and remain in force only for the continuance of such voyage.

iii. That it shall empower such travelling secretary to communicate with such local officers of the Society as he may meet, and to collect from them, for transmission to the Society in London, such information as they may have obtained ; duplicate copies of such documents being, in all cases, retained by such local officers.

iv. That on the return of such travelling secretary to London the diploma shall become null and void, and shall be surrendered to the Council, Director, or Secretary, the Council issuing in place thereof a letter of thanks, signed by the President or Director for the services (if any) of such Fellow in such office. The diploma to be endorsed with the names of the places visited by the said Fellow.

The Council are of opinion that the issue of such diplomas would materially stimulate the energies of Fellows of the Society, and by fostering an intercommunication between the Fellows, considerably aid in the advancement of anthropological science. Such appointments would, in the Council's opinion, also greatly promote the well-being of the Society, as they would, in effect, act as letters of introduction to foreign Anthropologists, and to governmental authorities and public bodies in all parts of the world ; such appointments being, in all cases, strictly honorary.

Branch Societies.—The increasing interest evinced in all parts of the world in anthropology is gradually leading the way to the establishment in the principal cities of Europe, Asia, America, Africa and the Colonies, of branch societies in union with the central society in London ; and a correspondence is now being carried on with eminent men of science in many parts of the world, with a view to the realisation of such an organisation as may extend the sphere of our efforts. It has, therefore, been felt desirable that an office should be created, having for its functions the management of all matters concerning such branch societies, under the direction of the Council and present executive. Such officer to be styled General Secretary for Branch Societies of the Anthropological Society of London, and his duties to consist in the conduct of all correspondence with the executive officers of those societies, the preparation of abstracts of their transactions for presentation to the London Society, and the general administration of subsidiary details in connection with such matters, acting in all cases under the control of the Council or Director for the time being. In the present condition of the Society it has not been thought advisable to attach any remuneration to the office, but it is recommended that at a future time a recognition of his services should be awarded to the holder of such office, by way of per-centage as herein-after provided. The Council have the pleasure to announce that they have secured the services of an active Fellow of the Society for this office.

Constitution of Branch Societies.—With a view to the efficient constitution of these branch societies, the Council have framed the following regulations :—

i. That the Secretary for Branch Societies do communicate with

eminent men of science abroad, and submit a list of persons qualified to act as President, Secretary and Councillors, in various localities, for nomination by the Council in London, a preference being given to local officers of the Society.

II. That a list of Fellows of branch societies be forwarded from time to time to the Council in London, for insertion in the ordinary list of Fellows, such names being indicated in the list by the prefix B.

III. That the rules of the Anthropological Society of London shall be adopted by all branch societies for their guidance, subject to such alterations as climate, locality, and customs may require.

IV. That the subscription to Branch Societies shall be two guineas per annum (or equivalent currency) to be thus allotted, residents in London paying direct:—Anthropological Society of London, seventy per cent.; branch society and collector, seventeen and-a-half per cent.; branch secretary in London, twelve and-a-half per cent.

V. That Fellows of branch societies shall receive, at the local office of each branch society, all publications of the Society, and also the *Anthropological Review and Journal*, free of cost.

VI. That the London Society guarantee all expenses of postage and transmission of parcels to their destination.

VII. That secretaries of branch societies shall transmit to the secretary for branch societies quarterly statements of transactions, papers, and proceedings, for publication in the *Journal* or *Memoirs* of the Society.

VIII. That the President of each branch society shall hold office for two years, from the period of his first nomination by the Council in London, and shall be eligible for re-election at the expiration of that time.

IX. That the branch society shall elect, by ballot, from their own body, two vice-presidents and four councillors, the London Society reserving two seats for councillors selected by the London Council. Two members of the council shall retire annually, one of these being a councillor selected in London, another being appointed in the same manner in his place.

Your Council are of opinion that these general regulations may be conveniently complied with in all branch societies.

Executive.—In accordance with the Rules of the Society, the Executive has been centralised in the hands of a Director and Secretary, and the experience of the past year has shown that the change thus made has been attended with the most beneficial results to the general management of the Society, as the immediate responsibility of the Director to the Council has simplified and strengthened the Executive, without in any degree impairing the action of the Council as a body, or of the other officers of the Society. The Council would now recommend that, at the first meeting of the new Council, one member of the Council should be nominated to act as Deputy Director, to act for the Director in his absence or illness. The Council would further recommend that some Fellow of the Society should at the same time be nominated Assistant Director, with a view of relieving the Director of some of his duties.

The Office of President.—In the Report of the Council for 1867 much regret was expressed at the retirement of the Founder of the Society from the office of President. This regret was only modified by the consideration that his services were still to be retained for the Society in the office of Director. It has been already stated that the concentration made in the Executive has been productive of beneficial effects. During the past year, however, inconvenience has arisen from the President being at a distance. Much of the success and value of the Society's deliberations depend on the tact and judgment with which the duties of President are performed. The Council felt, therefore, on the retirement of Captain Burton, that Dr. Hunt combined all the requisite qualifications for the office, and that his services to the Society as President would be of more value than in any other official capacity. They consequently made a written appeal to him to resume the position he formerly held. Dr. Hunt having been induced to consent to this, the Council cannot but congratulate the Society on the return of Dr. Hunt to the position he so ably filled.

Officers.—The financial position of the Society at the beginning of the year 1867 renders it necessary for your Council to take the subject of the regularly paid officers of the Society into consideration; and they decided to reduce the staff to two officers: one at £100 per annum, with the title of Secretary; and the other at £75 per annum, as Clerk, Reporter, and Collector.

Secretary.—Mr. J. Frederick Collingwood was elected to the office of Secretary on these conditions, and at the next meeting of the Council the following resolutions were passed:—

“That the Council, finding by the resolutions passed at their last meeting, that they are soon to lose the services of Mr. C. Carter Blake, as one of the Executive officers of the Anthropological Society of London, desire on this occasion to testify to that gentleman their high sense of gratitude for his past zeal and services on behalf of the interests of that Society; and being also desirous of making some acknowledgment of the same, hereby resolve that the decision of the Council excluding all Englishmen from the honorary fellowship for the future be suspended, *pro tem*.

“That, in consideration of the important services which Mr. Charles Carter Blake has rendered to the science of anthropology, both in the Anthropological Society of London and in the British Association for the Advancement of Science, he be elected an Honorary Fellow.”

The Council trust that health and prosperity may accompany Mr. Blake in his new vocation, and that he may long live to continue his study of the science to which he has, since the formation of the Society, devoted his time and talents.

Clerk, Reporter, and Collector.—The Council have great satisfaction in announcing that, acting upon the recommendation of a Committee specially appointed for the purpose, they have obtained the entire services of a Fellow of the Society in the capacity of Clerk, Reporter, and Collector, in the person of Mr. John Fraser, already known to many individual Fellows as an energetic and zealous anthropologist; and the Council think that his natural taste for anthropological re-

search will prove of great value. Mr. Fraser will enter upon his duties at a salary of £75 per annum after the approaching Easter recess.

Apartment.—Your Council have little to report concerning the state of the Society's apartments, except that additional furniture has been provided, with a due regard for economy, to meet the increasing requirements of the Society. The Society, at the same time, the Council have to state, stand precisely in a similar position to other societies occupying any portion of the premises at No. 4, St. Martin's Place, as the late changes made by Parliament in reference to the construction of a new building for the National Gallery necessitate the proximate removal of the house, the site being required for the contemplated structure approved by Government. No definite period for the removal can yet be assigned; but due care should be taken, when the occasion arises, to secure commodious and permanent premises for the accommodation of the Fellows, and for the safekeeping of the Society's library and museum.

Library.—The past year has seen a very large increase in the Society's library, and many most important works have been added by the liberality of the Fellows, of learned bodies, and of private individuals. The number of volumes now in the library amounts to 1523. These works have been re-arranged under the classified heads adopted last year by the Society, viz., Archaic, Historical, Descriptive and Comparative Anthropology, and Periodical Publications. A catalogue of the library has been issued during the year; and supplementary catalogues will be added at convenient intervals for the information and guidance of the Fellows, who, the Council note with pleasure, have very largely availed themselves of the works of reference in the library during the year 1867. It has been decided by the Council that, in the case of duplicate copies of works being presented to the Society, these should, where it appears desirable, be exchanged with other societies, according to value, for books not in the Society's library. The following gentlemen and public bodies have presented works to the library during the past year:—The Acad. Cæsarea Leopoldina Naturæ Curiosorum; J. McGrigor Allen, Esq., F.A.S.L.; F. C. Bakewell, Esq.; T. Squire Barrett, Esq., F.A.S.L.; Dr. W. Bell; T. Bendyshe, Esq., V.P.A.S.L.; C. Carter Blake, Esq., F.G.S., Hon. F.A.S.L.; Professor Burmeister; P. B. Du Chailu, Esq.; Dr. C. Collingwood; J. W. Conrad Cox, Esq., B.A., F.A.S.L.; Dr. Bernard Davis, F.A.S.L.; W. C. Dendy, Esq., F.A.S.L.; G. Ellis, Esq.; Sir G. Duncan Gibb, Bart., F.A.S.L.; James Gowans, Esq.; James Hunt, Esq., Ph.D., F.S.A., F.A.S.L.; the Imperial Academy of Vienna; the Imperial Archæological Commission of St. Petersburg; E. P. Meredith, Esq., F.A.S.L.; Kenneth R. H. Mackenzie, Esq., F.S.A., F.A.S.L.; Professor Frederick Müller; J. Perrin, Esq.; W. T. Pritchard, Esq.

Museum.—The Council have to report that several very interesting and important additions to the museum have been made during the year 1867, especially in the collection of crania, which it is so desirable to increase by every means. The total number of skulls is now 108. The erection of a large case for these crania has been again postponed,

as in the present uncertain tenure of the Society's apartments it was thought inadvisable to incur an expense for fittings which might not prove applicable in such premises as the Society might hereafter occupy, and it is highly probable also that the collection of skulls will receive ere long some very important additions. A list of the objects of art, properly classified, is in course of preparation, with descriptive notes, rendering the list valuable as a work of reference. A similar list is also in contemplation comprehending the crania and human remains only; it is, therefore, urged upon the attention of the Fellows of the Society, that they should lose no time in augmenting this very important portion of the museum. The following gentlemen and public bodies have made donations to the museum during the past year:—Dr. Edwin Canton; Dr. Anton Fritsch; Dr. James Hunt, F.S.A., Dir. A.S.L.; Dr. Kopernicki; Kenneth R. H. Mackenzie, Esq., F.S.A., F.A.S.L.; the Museum of Christiania; Thomas Theobald, Esq.; Robert Bruce Napoleon Walker, Esq., Loc. Sec. A.S.L. for Gaboon; Henry G. Williams, Esq., C.E., Loc. Sec. A.S.L. for Ceará, North Brazil.

Publications.—The Council have ready for the press a sufficient number of papers for the third volume of the *Memoirs*, and *The Life and Anthropological Writings of Retzius*; Gratiolet, *On the Brain of Man and Apes*, with a life of the Author; Waitz's *Anthropology*, vol. ii;—*Africa*, with Notes and an Introduction by Capt. R. F. Burton, F.A.S.L., H. M. Consul at Santos. A new edition of White *On the regular Gradation of Man and Animals*, with Translations from Sömmering, and a Life of both Authors; Emmanuel Kant, *On Anthropology*; Carl Vogt, *On Microcephaly*. There are many other works which the Council consider might with great profit to the science of Anthropology be published in this country. They are especially anxious to publish a translation of the works of Karl Ernst Von Baer.

In consequence of many communications received from abroad in reference to the long-promised *Instructions for Local Secretaries*, the Committee appointed to settle the same not having determined on any Report, the Council request the Director finally to prepare such *Instructions*, by whom they will be submitted to the Society, and issued at an early date. An English edition of the Paris Anthropological Societies' Instructions is also being prepared by Dr. Beddoe.

Exchanged Publications.—The Council have to announce that the Publications of the Society are exchanged with those of the following Societies at home and abroad:—

In London: the Royal Society, Society of Antiquaries, Royal Asiatic Society, Royal Geographical Society, Royal Society of Literature, Social Science Association, and Ethnological Society. In Liverpool: the Philosophical Society. In Leeds: the Philosophical Society. In Edinburgh: Royal Society of Antiquaries of Scotland. In Glasgow: the Geological Society, and Philosophical Society. In Berwick: Naturalists' Field Club. In Gloucester: the Cotswold Naturalists' Field Club. In the Isle of Man: Manx Natural History

Society. In Truro : Royal Institute of Cornwall. Abroad ; in Europe : Paris Anthropological Society, and the Société d'Archéologie de Namur ; Amsterdam Academy of Sciences ; Dresden Imperial German Academy ; St. Petersburg Imperial Academy ; Moscow Société des Amis de la Nature ; Vienna Imperial Academy of Sciences ; Giessen Upper Hesse Society for Natural and Medical Science. In Prussia : Königsberg Physico-ökonomische Societät. In Spain : Madrid Sociedad Antropológica Española. In Asia ; India : the Royal Bengal Asiatic Society. In America : the Smithsonian Institution ; the New York Antiquarian Society. In Toronto ; Canadian Institute. In Australia : Royal Society of Victoria. A presentation copy of the Society's publications has been sent to Harvard College, Cambridge, Mass. ; Anthropological Society of Manchester ; Anthropological Society of Dundee.

Anthropological Review and Journal.—During the past year negotiations have been opened with the proprietors of the *Anthropological Review*, and the Council have insured a reduction of sixpence per copy on all copies taken by the Society. The Council have also received from the proprietors of the Review the entire proceeds of all the copies sold to the public ; in other words, all the profits of the *Anthropological Review* are to be handed over to the Society until it is out of debt. The spirited and liberal manner in which that Review has always been conducted has, up to this time, resulted in a pecuniary loss to the proprietors, and it was with very great reluctance that the Council felt it their duty to take it at a reduced price. With the present large circulation of the *Anthropological Review* it is expected that this year it will yield a profit. The Council are fully sensible of the important services rendered to the Society by the *Anthropological Review*, and they trust the time is not far distant when it will be in the power of the Society to second in a substantial manner the efforts of the proprietors to make the Review more worthy of the high position it has already taken in scientific literature. The successful establishment of a like independent journal for Anthropology in Germany has rendered it highly desirable that all parties should join in a hearty support of the British *Anthropological Review*.

Anthropological Explorations.—In connection with the progress of Anthropological explorations, the Council have directed a letter to be addressed to the principal contractors for public works, railways, and buildings, urging on them the careful preservation of human remains and objects of art discovered in the course of their undertakings. It is hoped that many valuable fragments of interest to science may thus be preserved.

Congrès International d'Anthropologie et d'Archéologie préhistoriques.—This important body, which holds its meetings annually in one of the principal cities of Europe, will assemble in the course of the present year under the presidency of Sir John Lubbock, Bart., F.R.S. The Council expect that many of our foreign colleagues will attend the meeting and they can have little doubt that it will exert an enormous influence on the advancement of the interests of Anthropological science. When definite arrangements have been made the

Council will announce to the Fellows what part the Society will be able to take in the Congress.

The Rose Collection of Danish Stone Implements and Weapons.—This extremely valuable collection, the result of several years' labour, undertaken by Mr. Wilmot Rose, C.E., has been recently exhibited in the Society's Museum. The beauty, number, and rarity of the specimens form a considerable contribution towards Archaic Anthropology. The exhibition has been visited by most of the principal English collectors. The Society has been greatly indebted to Mr. Rose for his kindness in placing the objects at the Society's disposal, and the Council is of opinion that such a collection, obtained entirely from one locality, should greatly stimulate the ardour of investigators into this valuable branch of inquiry.

British Association.—The Council approach the subject of the continued negotiations with the British Association for the Advancement of Science, on this occasion, with the cordial expression of a hope that at the forthcoming meeting at Norwich, a definitive settlement is likely to take place. The fact that no department was appointed at Dundee in connection with Anthropology by the Sectional Committee, elicited on the part of the inhabitants of that town, and the visitors to the Association, an expression of opinion highly satisfactory to the students of Anthropological science. It is to be anticipated that the authorities of the Association will, on the approaching occasion, give Anthropology a place to which it is legitimately entitled, in Section E, where all students of the science of man can harmoniously extend its sphere of interest and usefulness. The Council are disposed to think that a marked change has been gradually coming over the estimation in which the science is held, and that emulation and not opposition will soon reign among its students.

The Council cannot but draw the attention of the Society to the fact that the successful termination of the visit to Dundee is due to the temperate, conciliatory, and consistent advocacy of our common interests displayed by representatives of the Society on this recent occasion. While emphatically recording the Council's thanks to those gentlemen, we cannot but continue to urge in the strongest manner the absolute and vital necessity of a larger attendance at the Association of the general body of Fellows. It is only by union upon broad and liberal principles, that triumph can ultimately be secured. Your Council have also to record their high appreciation of the very catholic reception accorded to Anthropology by the authorities, press, and general inhabitants of Dundee.

Anthropological Conference.—The success of the Conference held in September last at Dundee, warrants a hope on the part of your Council that this institution may, in other parts of Great Britain, receive a similarly cordial reception when it is again summoned to defend the growing vitality of anthropological science. It is only by a wisely directed exposition of the principles of the science that a general acquiescence in its importance can be obtained at the hands of the public. It is impossible to be too much before the intelligence of the nation in this respect, and hence it is to be desired that this

body shall receive every encouragement, not merely from the Council of the Anthropological Society of London, but from every student of anthropological science.

Conclusion.—In concluding this Report your Council consider that with care and energy, there is no reason to doubt of the final acceptance of anthropology in its most extended sense by the country at large. It must be remembered that everything depends upon individual exertion, that by a proper sub-division of the work success can alone be assured, and that the enormous area before us presents a congenial field of inquiry for all classes of Anthropologists.

R. S. CHARNOCK, *Chairman.*

Mr. CHARLES HARDING then moved, that the Report of the Council now read be adopted. It was a highly satisfactory Report, and full of explanatory details.

Mr. J. CUTHBERT briefly seconded the motion. He was glad to observe such an advance in all the Society's undertakings, and as a new Fellow, entertained great hopes from the statement just read, that much more would follow.

The CHAIRMAN then put the resolution to the meeting, and it was unanimously carried.

Mr. BRABROOK then read an obituary notice of the life of Dr. Boudin, late an Honorary Fellow of the Society, as follows:—

Dr. Boudin. By E. W. BRABROOK, Esq., F.S.A., F.R.S.L., F.A.S.L., etc.

In the list of distinguished men of science whom we hastened to enrol as Honorary Fellows of this Society on the 21st April, 1863, one of the foremost names was that of Dr. Jean-Christian-Marc-François Joseph Boudin, of Paris, whose death, on the 9th of May last, we have to deplore. Dr. Boudin had filled in 1862 the office of president of our sister society in Paris, which has been in advance of us in the expression (through the mouth of a friend and colleague of his of long standing, Dr. Perier) of their sense of the loss to our science which has been experienced by his death, and of their grateful recollection of his devotion to the interests of that young and vigorous society. He was one of the most able and successful workers in a department of anthropology, which is sometimes neglected and often undervalued,—but nevertheless is one of the highest importance—that of medical statistics. His labours in this branch of our science have been so various, that it will not be practicable to give more than a very cursory review of them in this place. It is a department of our studies which, to be successfully pursued, requires in its followers great industry and acuteness, as well as special opportunities for the collection and weighing of facts.

That these qualifications were possessed by Dr. Boudin in a very high degree will presently appear. He was born at Metz, in the department of the Moselle, on the 27th April, 1806, and was therefore just sixty-one years of age at the time of his death. At the age of eighteen he became a pupil in the Military Hospital of Metz; two years later he accompanied the expedition to Spain, and afterwards that to the

Morea, and took his doctor's degree in 1830. In 1835, he distinguished himself by his efforts to combat the scourge of cholera, which was then desolating Marseilles. About this time, he commenced literary work by the founding of the *Marseilles Medical Gazette*. The years 1838 to 1840 he spent in Algeria, as medical director of the army there engaged, and profited by his observations there to publish, on his return, a "Treatise on Intermittent Fevers." His experience of Algeria was unfavourable; he formed a decided opinion that French colonisation and acclimatisation there would be matters of great difficulty, and he did not hesitate to express it. Outspokenness of opinion, and some amount of (perhaps) undue ardour in polemic warfare, appear to have been leading elements in Dr. Boudin's character. M. Perier says of him: "He was the very type of a savant—courageous, rigid, inflexible."

His researches into this particular question led to his entering upon the wide field of investigation into general medical geography, which he made entirely his own. In 1842, he read, before the Royal Medical Society of Marseilles, a paper on which he afterwards founded his "Treatise on Medical Geography and Statistics, and on Endemic Diseases" (2 vols., Paris, 1857). This work comprises an inquiry into medical meteorology and geology, the statistical laws of population and of mortality, the geographical distribution of diseases, and the comparative pathology of the races of mankind, and is well known and esteemed as an anthropological manual. Our learned fellow, Dr. A. Mitchell, justly says of it that "nothing relating to the geographical distribution of disease seems to have escaped Dr. Boudin's researches." An example of the practical value which attends inquiries of this nature, may be found in the excellent paper which was read before this Society by Mr. Bendyshe about four years ago, when there was some prospect of British troops being sent to Copenhagen, as to the precautions that should have been taken to ensure their health. If an equally able hand would apply Dr. Boudin's principles to the expedition now in Abyssinia, the result would be of very great importance. This valuable work we are fortunate enough to possess in our library, and I trust some Fellow of the Society will be found who will furnish us with an abstract of its valuable contents.

One curious portion of Dr. Boudin's inquiries is that into the height and weight of men in different countries, and into the increase in height and other requisites for military service of the young men of France. His object was to dispel the impression which some time ago had obtained a certain currency, that the youth of France were degenerating in the several attributes of vigorous manhood. He shows that, during the thirty years between 1831 and 1860, the proportion of young men possessing the necessary height had increased about four per cent; while the total number of exemptions from military service, from all causes whatever, had steadily diminished. He develops a fact which is significant as an indication of race, that the proportion of exemptions is almost universally less in the northern and eastern departments, and greater in the southern and western. In connection with this subject, Dr. Perier relates an anecdote which illustrates, not only the zeal for investigation which distinguished our late Honorary Fellow, but also his real goodness of heart and unselfishness. Observing one day, among

the attendants at the infirmary, an intelligent man of the rank of a sergeant, he took him into his employment as secretary, and set him to work to collect statistics of exemptions from service on the ground of splay-foot. The results, with valuable additions by Dr. Boudin himself, will be found published under the name of the humble author, who, I trust, has by this time made good use of the start in literary life thus given him.

To one form of illustration, which is of great value in statistical works, Dr. Boudin was particularly attached, that of coloured or shaded maps and diagrams; and some of those he published are exceedingly graphic. He collected the results of his observations in a physical and meteorological map of the world, exhibiting, as far as known, the distribution of temperature, wind, rain, and snow. He has left unfinished a work of this kind, involving great labour, which it is to be hoped some worthy successor will be found to pursue, viz., an ethnographical map of the world.

Among the numerous valuable contributions which he made to the publications of the Anthropological Society of Paris, that on the "Non-cosmopolitism of Human Races," in addition to the light which it threw on the general issue, established certain new facts of great practical importance in respect to the power of Europeans to endure tropical and arctic climates. On the important questions of the dangers of consanguineous unions, the necessity of "crossing" in families, and its effect in races, Boudin communicated, both to the Academy of Sciences and to the Anthropological Society of Paris, a valuable series of data. His views gave rise to a warm discussion, and were controverted by Dr. Dally and others in Paris, and by Dr. A. Mitchell before our own Society. It is not for me to say here which side had the greater weight of evidence in its favour. It is enough to say that the facts which Dr. Boudin collected are ample to show that, in a large proportion of cases, consanguineous unions are highly dangerous.

His inquiries embraced a great variety of subjects, such as the production and consumption of food, water, cretinism, tænia, the health and mortality of army horses, etc. As an army surgeon he made it his business to collect and publish information and instructions of a practical character on such questions as ambulances, recruiting, invaliding, barrack and hospital regulations, etc. For twenty years he was one of the editors, and a large contributor to the pages of the *Annales d'Hygiène* and the *Recueil de Mémoires de Médecine Militaire*.

I have left to the last a notice of certain contributions of his to the science of anthropology, which were in some degree out of the course of his professional studies. These are his papers on the questions of Anthropophagy—Human Sacrifices, Human Hybridity (in a monogenistic sense), the Worship of the Phallus and that of the Serpent. The two latter memoirs we possess in our library, and they contain a store of varied learning on both these curious subjects, which will well repay perusal. Dr. Boudin maintains, in opposition to those who look upon objects bearing a Phallic character as merely symbol-

ical, that they have everywhere received actual worship; that, like all other forms of worship, that of the Phallus was taught by oracles, and emanated from a real or supposed revelation external to mankind, and not from the impulses of mere sensuality. Serpent worship, which in some respects is allied to that of the phallus, he shows to have existed among a great number of the people of antiquity, and to be practised in the present day among widely differing communities.

Dr. Boudin's distinguished public services raised him to the rank of Chief Physician in the military medical service of France, and procured him decorations from his own Sovereign and from those of Austria and Italy. His friends complain that they were not sufficient to obtain him a seat in the French Academy of Medicine; but in the position his talents secured him, he might well afford to disregard professional jealousy. He leaves behind him, we are informed, a large collection of materials, bearing on the investigations to which his life was devoted, which cannot fail to be of great value. His friend, M. Perier, sums up his history as that of a life full of honour and of exemplary devotion to the interests of science and of his country; and the brief account I have been able to give of his labours and his life will, I am sure, induce you to concur in this verdict, and (now that the little asperities of discussion are ended) to acknowledge our late Honorary Fellow, Dr. Boudin, as a distinguished ornament of the science we study.

Mr. MACKENZIE then read the following obituary notice of the life and anthropological labours of Dr. Nott, of Mobile, Alabama, U.S.A., late an Honorary Fellow:—

The Life and Anthropological Labours of Dr. Nott of Mobile, Hon. F.A.S.L., by KENNETH R. H. MACKENZIE, Esq., F.S.A., F.A.S.L.

Although I have undertaken, on the present occasion, to write some account of the labours of Dr. Nott, our late Honorary Fellow, in the cause of anthropological science, I am aware that what I am able to offer must necessarily be of a very jejune and incomplete character, as, properly to illustrate both the extent of the work he performed and the additions he made to anthropological science, would be practically to write a history of transatlantic anthropology, from the death of Dr. Samuel George Morton to a very recent period. I am compelled, therefore, on the present occasion, to be very brief in what I have to say, and to reserve much which might both interest and inform the Fellows of the Society for some future time, when it will be possible to more accurately assess the quantity and quality of the services he rendered to the science.

J. C. Nott was a native of Columbia, South Carolina, and was born in the year 1804; his attention was early directed to medical science, and he took his degree at the age of twenty-three, in the year 1827, at Philadelphia, from which city he returned to Columbia, to practise his profession. He appears during this time to have diligently prepared himself, by wide and varied researches, for the prominent position he was ultimately to assume in the ranks of science, and to have early enlisted as a disciple of the school of Morton, who may be regarded

as the founder of anthropology in the United States. In conformity with the custom of his country, and as Morton had done before him, he visited Europe, for the first time, in the year 1835, and then carefully familiarised himself with the various collections then in existence at all illustrating the subject matter, alike of his profession and of his favourite contemplation, Man. There can be little doubt that the energy exhibited by Dr. Morton in the establishment of a craniological museum at Philadelphia, had its influence in confirming and directing the bent and aim of Dr. Nott's studies; and his subsequent labours, to which I shall have occasion hereafter to refer, entitle him to be considered the most eminent of that great anthropologist's disciples.

At the period of Dr. Nott's visit to Europe, the craniological collection formed by Morton was far from being what it now is, and those who sought to practically instruct themselves in the theories of cranioscopists and anthropologists, were necessarily obliged to seek such information in the collections of Europe, as drawings and measurements in those comparatively recent years were rarely to be implicitly relied upon. During this visit Dr. Nott laid, therefore, the foundation of his future labours. On his return to America, fully acquainted with all that Europe could then teach him, Dr. Nott was, from his residence in the Southern States, brought face to face with the negro race, and enabled by long familiarity to form accurate and just views regarding his place in the social scale. Of the views he ultimately formed and enunciated it will be my duty to say a few words presently. Dr. Nott after his European voyage, removed to the city of Mobile, in Alabama, where he continued to reside, with few intermissions, up to the time of his death, in the past summer. His life, like that of most professional and scientific men, appears to have been tranquil and studious, and occasional lectures and tentative experiments at authorship varied the monotony of his professional life—if the life of an active and enthusiastic physician can be regarded as admitting of monotony. As has well been observed by Dr. Henry S. Patterson, of Pennsylvania College,* the United States is a country “where, if literary advantages are otherwise deficient, the inducement and opportunities for anthropological research are particularly abundant.” Nott was amply alive to this truth, and patiently accumulated facts of various kinds, without prematurely committing himself to theories which might in the end prove fallacious, and detract from the complementary value of what his researches might offer. Still, from the first, his sympathies led him to adopt the polygenistic school of anthropology, and to criticise very freely the accepted notions of unity then prevalent. So long ago as 1849 his publication, at Charlestown, of *Lectures on the Biblical and Physical History of Man*, and of *The Physical History of the Jewish Race*, involved him personally in a controversy, which had been raging between Morton and the defenders of unity since the year 1846, with the Rev. Dr. Bachmann, the ornithologist, who had scurrilously attacked Morton on many occasions, in various publications, such as *The Doctrine of the Unity of the Human Race examined on the Principles of Science*, and a running fight was maintained between these gentlemen

* Memoir of S. G. Morton, in *Types of Mankind*, by Nott & Gliddon, p. xxxii.

for some years. Dr. Bachmann was a rigid interpreter of historical anthropology as delivered in the early chapters of Genesis; considered the Mongol and American autochthones as sons of Japhet, and regarded the curse of Canaan as still operative upon the negro. Whatever the ultimate fate of the negro, there is subject for jubilation in the fact that after the unconditional liberation of the black race in the States, we are at least spared for the future by having this early instance of commination removed from the arena of argument.

Dr. Nott naturally was more and more confirmed by his assiduous labours under Dr. Morton, in the doctrine of polygeny, on which the latter wrote, in April 1857, only a fortnight before his death, in a letter to Gliddon, in the following memorable words: "The doctrine of the original diversity of mankind unfolds itself to me more and more with the distinctness of revelation." When Morton died, on the 15th May, 1851, he left the defence of this anthropological axiom to the adherents of his school, then mainly represented by Nott, Gliddon, Usher and Patterson.

To effectually vindicate the truth of the positions advanced by Morton, and at the same time, in a noble, magnificent and useful manner, to erect a monument to his memory, Dr. Nott, aided by Mr. George R. Gliddon, the eminent Egyptological lecturer and energetic anthropologist, undertook a considerable work. I had myself the honour and happiness of an intimate friendship with the latter gentleman, which terminated with his untimely and sudden decease at Vera Cruz, in 1859, and from him I gathered much of the literary history of the enterprise. While to Dr. Nott is due the title, and those portions of that work, published in 1854, known as *Types of Mankind*, especially dealing with the phenomena of race, of hybridity, and of the distribution of animals; yet to George Gliddon is to be ascribed the conception and the larger portion of the execution of that remarkable work. Familiar as I became from constant communication with the expressions and modes of thought of Mr. Gliddon, I can trace his hand throughout the pages of the book, and certainly no joint labour was ever more pleasantly and effectually performed. There are some who affect to see in *Types of Mankind* a political bearing, which, however, I frequently heard Gliddon emphatically disclaim. It was, really, precisely what it professed to be—a memorial of the great anthropologist of Philadelphia.

It is not my purpose to enter into a review of this important work—most anthropologists are familiar with it—and its publication marks an era in the history of anthropology. In the pages of *Types of Mankind*, the plurality of the human race is urged with a rare energy of purpose and distinctness of utterance, and the fearless tone adopted by Dr. Nott, in his previous lectures, pervades every line of his contributions to it. It is also an interesting book as an experiment on the taste of the public, eminently to the credit of the great body of readers. Dr. Bachmann attempted to renew the controversy after the issue of *Types*, in a pamphlet entitled *Notice of Types of Mankind, with an examination of the Charges contained in the Bio-*

graphy of Dr. Morton, but it had long since failed to interest the public what the opinions or position of the reverend gentleman might be, and anthropologists rather studied the conclusions of Morton, Nott and Gliddon, than troubled themselves with the opposition of others. We owe to Dr. Nott much for this work, most suggestive and catholic-spirited in its aims and liberal in its expressions. No person reading it can fail to desire to know much more of our science, and I may say for one that the interest I have long felt in anthropology was entirely caused by its perusal, and by my subsequent friendship with the amiable colleague of Dr. Nott. I purpose ere long to complete some sort of biographical memoir of George Gliddon, and have kindly been aided in this labour of friendship by Mr. Gliddon's widow.

The eminent position which Nott had attained in science, and which he retained during the remainder of his life, led to his being called in 1857 to the Chair of Anatomy in the University of Louisiana; but this function he only fulfilled for one winter. Indeed, at this time, Dr. Nott was preparing, in conjunction with his former colleague, Mr. Gliddon, for the publication of their subsequent anthropological work, *Indigenous Races of the Earth*, to which Professor Maury, Mr. Pulezky, Drs. Meigs, Leidy, and Agassiz lent their aid. This book may be regarded as a continuation of *Types of Mankind*. It was originally intended by Mr. Gliddon that a memoir of my own, "On the Primeval Religious Systems prevalent among the Indigenous Races of America," should have been incorporated in this volume, but the great bulk of the book precluded the execution of this design. I hope, at no distant date, to present this memoir, with additions and corrections, to the Society to which I have the honour to belong, and of which the subject of these notes was so distinguished an ornament. I consider my association with anthropological science, however slight, mainly due to the influence of Dr. Nott.

Dr. Nott speedily returned to Mobile, and there established the Medical College of Alabama, himself occupying the congenial chair of Surgery. The legislature of Alabama endowed the College with 50,000 dollars, and made it a branch of the State University; thus marking their appreciation of the labours of their eminent countryman. The first session was opened in November 1859.

Besides being an active contributor to many periodicals, Dr. Nott was the author of a series of lectures on surgery, and his most recent separate publication is entitled *Contributions to Bone and Nerve Surgery*. In this work he follows up the surgery of shattered bones, and attempts to lay down rules by which professional men may guide themselves in the treatment of this large class of injuries.

One of the latest contributions of our deceased colleague to anthropological science, is to be found in the *New Orleans Medical and Surgical Journal* for July, 1866, and one extract from it will show that to the last he was loyal to the principles his investigations had led him to adopt, and unflinching in the proclamation of them. The article treats on the Instincts of Races, and after entering on his subject, he continues in words which contain a ring of true courage and a vein of sly humour, thus:—

“The question then, as to the existence and *permanence* of races, types, species, or permanent varieties, call them what you please, is no longer an open one. Forms that have been permanent for several thousand years, must remain so at least during the life of a nation. It is true there is a school of naturalists among whom are numbered the great names of Lamarck, Geoffroy St. Hilaire, Darwin and others, which advocates the *development* theory, and contend not only that one type may be transformed into another, but that man himself is nothing more than a developed worm; but this school requires *millions of years* to carry out the changes by infinitesimal steps of progression. With such theories or refinements of science, our present investigation has no connection, as the Freedman's Bureau will not have vitality enough to see the negro experiment through many hundred generations, and to direct the imperfect plans of Providence.”

With this declaration of his fixed belief in a true natural subordination of races Dr. Nott died, and the miserable train of catastrophes which has ensued is a sad practical commentary on the fact he had so well illustrated in his anthropological labours. These valuable researches are now closed; the most unflinching advocate of truths, however unpalatable in themselves, which anthropology has had in the United States, is now departed from amongst us, and while we may regret the comparatively early age at which our illustrious colleague has vanished from the world, we can but hope that America has yet in the midst of her, many men of science able and willing to work as manfully, and as modestly, as the Fellow whose loss we now deplore.

The SECRETARY then read the following—

Obituary Notice of Mr. Richard Haughton, F.A.S.L.

Mr. Richard Haughton was the eldest son of Dr. Haughton, a branch of the ancient family of Haughton, of Haughton Tower, in Lancashire, and was born the 27th March, 1782, in the County of Wicklow. Much of his early life was spent with a relation, who possessed landed property in the county of Wicklow, and having no children, expressed a wish to make him his heir, and in consequence requested his parents not to give him a profession. Nevertheless, gifted as he was with considerable taste for literature and the fine arts, there were few branches of study which his active mind did not embrace. Even surgery and medicine were followed up to a certain point, but painting and the study of languages were his favourite pursuits. For the former he evinced so much talent that some of the first artists of the day tried to induce him to follow it as a profession, feeling sure of his success.

On the death of his relative, Mr. Haughton, finding the estate had not been left to him, devoted himself to the study of the Oriental languages, and, with considerable difficulty, obtained permission to reside at Paris, where he remained for a period of four years, to enable him to profit by the lectures and teachings of the Oriental scholars there. Among these he formed several lasting friendships, more especially with the late Baron de Sacy, with whom he maintained

a correspondence for a very long time afterwards; also with M. La Grange, M. Chézy, and others. As early as the year 1826, Mr. Haughton had collected materials for the compilation of a Persian Grammar and Dictionary, but was compelled to abandon the project from a threatening of paralysis of the nerve of the left eye. He was appointed Professor of Oriental languages at Addiscombe, in 1820, where he was much beloved and respected. In the midst of his labours, in 1851, he was afflicted with loss of sight. The most celebrated oculists were consulted, and pronounced that the malady arose from over-work, and that the evil could only be mitigated by perfect rest. Mr. Haughton immediately sent in his resignation to the Court of Directors, but, from an over-sensitive regard to what he considered his duty, remained at his post until a suitable successor could be found. This delay was most unfortunate, as it precluded all hope of recovery. Broken health soon succeeded, and obliged him to pass the remaining sixteen years of his life in seclusion, surrounded by children and grandchildren, to whom his beautiful patience and resignation were a daily example; while his truly capacious mind was a rich storehouse of knowledge ever at their command. Mr. Haughton died at Ramsgate on the 5th April, 1867.

Mr. Haughton was Fellow of the Royal Asiatic Society of Great Britain and Ireland, as well as that of France; of the Anthropological Society; the Société Royale des Antiquaires du Nord, and other learned bodies. He was brother of the well-known Orientalist, Sir Graves Haughton.

Mr. J. McGRIGOR ALLAN proposed that the thanks of the society be given to Mr. E. W. Brabrook for his obituary notice of the life of Dr. Boudin, and to Mr. Kenneth R. H. Mackenzie for his notice of the life of Dr. Nott.

Mr. CHARLES HARDING seconded the motion; and it was carried unanimously.

Messrs. BRABROOK and MACKENZIE severally acknowledged their obligations to the Society for the honour.

The CHAIRMAN then called upon the Treasurer, the Rev. Dunbar I. Heath, to deliver the Anniversary Address.

Anniversary Address delivered before the Anthropological Society of London, the 14th Jan., 1868. By the Rev. DUNBAR I. HEATH, M.A., Treasurer A.S.L.

GENTLEMEN,—The honourable task has devolved on me of delivering before you the Annual Address on this the fifth anniversary meeting of the Society. Your President, Consul Burton, is, as you are aware, unable to be present to-day, and it is at the request of the other officers of the Society, and with the sanction of the Council, that I now address you, an undertaking which, although I feel it to be honourable, is at the same time of no small difficulty.

It will be my duty to speak to you on the general state of the affairs of the Society, and I shall, in the first place, touch upon those points with which I, as your Treasurer, am specially concerned, viz., the finances of the Society.

It is now five years since the Anthropological Society came into existence. During that time the amount of money which it has expended in printing alone amounts to a sum of no less than £4,000. This sum, you must remember, however, has not been simply spent in printing works for distribution to the Fellows of the Society; but we are, in fact, the actual possessors of a stock of publications on anthropological science, which are being gradually sold to the public. Thus, some of our capital is locked up in these publications, and we could only realise this portion at present, if we wished to do so, at a sacrifice. Although this may be, to some extent, an injury to the Society financially, we have the satisfaction of knowing that these publications have materially assisted to promote the study of our science amongst the general public. The standard works we have published, such as Waitz and Blumenbach, cannot fail eventually to well repay the Society for the outlay upon them.

In the balance sheet of assets and liabilities, we are also unable to say what is our exact financial state, for the additional reason of the number of defaulters on our books. As your Treasurer, I feel it incumbent on me to state that I have advised the Council to take shortly some serious steps in order to reduce this list. A Publishing Society like our own, can only be conducted successfully when all unite loyally to discharge their duties to the Society. The first and foremost of those duties, I venture as your Treasurer to suggest, is that the annual subscription should be promptly paid, and I trust that the defaulters will see that they are impeding the progress of the Society by their delay. The recent financial panic has, no doubt, assisted to increase the defaulters' list, and the Council have not thought it advisable to press the Fellows of the Society for their subscriptions. The time, however, has now arrived when an effort should be made to collect all outstanding debts to the Society. Up to this time the expenditure for one year has been estimated on the income of the preceding year: in future it is proposed to print works for the money actually in hand.

I have dwelt on this point, because I consider, that a great part of the future success of the undertakings of the Society will depend on the state of its finances. In the early history of the Society it was not only allowable, but almost a necessity, that the expenditure should exceed the income. The time has now come, however, when it is thought that we have done enough to show the reality of our intentions as a Printing and Publishing Society, and that for the future we should endeavour to secure for the Society as solid a foundation financially as we have acquired scientifically.

On taking a review of the labours of the Society in the past, it cannot but be a source of gratification to the Fellows to know that at no time in its history, has greater interest been shown in their proceedings than at the present. On previous anniversary meetings we have had to defend ourselves from the attacks which were made upon us from all quarters; now such attacks are rarely heard. Those students of man who wish to combine all the partial studies of man under the one name of anthropology, have for four years had to fight for the

very existence of this name; now we no longer hear the cry "Anthropology is not a science!" The question of to-day is—"What does anthropology teach?" This is the latest and most gratifying sign of our progress. The name of anthropology has been received and adopted by the public at large to signify a science, or series of sciences, not only of interest, but of the most profound importance, to mankind. A perusal of the periodical literature of the day at once reveals to us the fact that the eyes, not only of the scientific world, but of thinking people in general, are simultaneously turned to the investigations of the anthropologist. The attention which was paid to, and the interest felt in, all questions of anthropological science at Dundee, by a people so peculiarly tenacious of early imbibed principles and associations as the Scotch, cannot but be considered as a most gratifying sign of the times. It is also satisfactory to know that the people of Great Britain, whether English, Scotch or Irish, are all feeling something more than a transitional interest in the science of man. They are now becoming alive to the fact that anthropological science is a thing which concerns each man and woman within these realms; that it is, in fact, the anthropologist, by whatever name he now goes, who must be consulted for the future help and guidance in the government of alien races.

Our public and political writers are awaking also to the fact that there are such distinctions as those which have long been pointed out by anthropologists. It is true that attempts are yet frequently made to deny that problems like the Irish question, for instance, are matters of race, but every fact adduced goes to show that such they are. Politicians continue sometimes to act like the ostrich, and by hiding from themselves objectionable facts, ignore their existence; but they will not be able to do this much longer. The views enunciated on this subject by our founder, Dr. James Hunt, and by that distinguished English anthropologist, Dr. John Beddoe, are destined ere long to meet with general, if not universal, acceptance. "We English having attempted to manage and govern a people whose nature and feelings we could not understand, the results have been deplorable:" such was the language used by Dr. Beddoe at the opening of the Manchester Anthropological Society in November, 1866.* Do we understand the Irish any better now? The treasonable conspiracy now known under the name of Fenianism, is little more than the abnormal or diseased expression of long-endured race antagonisms and jealousy. Let it not, however, be supposed that this question of Ireland is to be solved by the anthropologist in his study, any more than by the statesman in his closet. On the contrary, we have yet to learn, not only what are the relative numbers of the different races inhabiting Ireland, but also to acquaint ourselves with all other facts in connection with these races, before we can be in a position to legislate successfully. The same observations hold good in reference to our relations with the indigenous races with whom we come in contact in our conquests or colonisation. The future government of any people can

* "Anthropological Review," vol v, p 20.

only be successfully carried on when we know the elements with which we have to deal. The anthropologist no more than the chemist, can predict the effect of the mixture of unknown quantities of different elements. Before a safe step can be made in a right direction towards establishing a lasting and secure basis for the present government of Ireland, we must ascertain what are the relative proportions of which the population is composed.

If it be true that our statesmen do not understand the Irish people, how is it possible that they can hope to govern them with mutual satisfaction? The time, however, is not far distant when it will be both advisable and necessary for our statesmen to know something more than they know now with regard to the races of Ireland and their several special aspirations. It may seem strange to hear it hinted that an Anthropological Commission should, in the first place, be appointed to collect facts with regard to the Irish races! But the races in Ireland are no exceptions to races elsewhere. If modern history have taught us one lesson more plainly than any other, it is that we must first understand a race or people before we can govern it—and why should there be any exception to this law?

If we turn to the continent, we find that the same law prevails. The best legislator or politician is he who best understands the elements he governs; or, in other words, the best practical anthropologist.

It is desirable to take, at the present juncture, a more catholic view of the present tendency of the age, of which Fenianism is but a passing symptom,—that tendency of self-assertion evinced by all races and nationalities. What is now occurring among the Celtic and other races of Ireland, happened years ago in Austria and Russia under similar political circumstances, when the dominant Teutonic race or government tried to rule the autochthonous populations by force, without previously attempting to understand them. Certain concessions have recently been offered to the national prejudices of Poland, Hungary, Bohemia, and others among conquered and subdued peoples, in hopes of better results; but the success of this change of policy remains to be seen.

When we consider such subjects, there is evidently a great field both of labour and usefulness, as I have said, open to the Society. We can as yet only see dimly the real influence which the deductions of the anthropologist will, at a future day, have in the government of the world. Astronomy and geology have already yielded practical results, but the lesson to be learnt from comparative anthropology at least equals either of these in usefulness. The science of anthropology is, however, far more complicated than either astronomy or geology, and opposes so many more prejudices and passions in its study, that the results attained can only gradually obtain general acceptance. As Dr. David Page has recently well remarked, our own Society is but a thing of yesterday. We are, no doubt, still in the infantile stage of our existence. Many of our teachings are as yet only general, and they lack the power of being rigidly demonstrated. But even allowing all the imperfections of our science, we yet feel that we hold the keys to

some of those questions which must remain for ever the most interesting and important.

We must remember that both astronomical and geological science are now receiving very great support from the public funds. We rejoice that such should be the case, for it is the normal progress of all sciences to begin with the inorganic and gradually rise to the organic. Botany and zoology are now receiving the attention of the state. State commissioners are appointed to investigate the laws regulating the history and development of the fishes of the sea. Soon, no doubt, it will extend its aid to investigations into the history and laws of growth with reference to the propagation of the mammalia. At present this question is left to an independent body—the Acclimatisation Society,—but we have no doubt the state will see that this duty essentially belongs to itself. And when this is accomplished, the state may also see that the Science of Man should have at least the same support as is accorded to geology. Associated as this country is with nearly every great division of mankind, it becomes the paramount duty of the state to encourage our science. If the government support a school of mines, why should it not also support a school for the scientific study of mankind?

This question the present generation may see put to the Legislature by eminent scientific men, now, we hope, on the eve of taking a place in Parliament. We have only to go on quietly and zealously with the work before us, and the day will come when we shall find that, although our labours in the cause of truth have been simply and solely for her own sake, yet our deductions will be accepted as the basis of all truly scientific legislation.

The attention of men of science has, during the past year, been much occupied with the very important question of the teaching of Science in our schools and colleges. Having myself gone through the University of Cambridge, I may be permitted to add my testimony to the value of the teaching of physical science as a branch of both elementary and advanced study. There are in the universities still many who would teach science only metaphysically and theologically. Some seem instinctively to dread positive science in any form. With others, on the contrary, there is an active desire to free themselves from the metaphysical stage of science. As a sign of this, I may instance the formation of a Society for the study of Anthropology amongst the undergraduates of the University of Oxford, so remarkable for its theological and mediæval proclivities. The students of our other universities will, no doubt, follow the example thus set them. Such societies deserve, I think, our warmest support and encouragement. Under the present aspect of public affairs, we cannot expect the State to do more than partially assist labourers in the separated departments of anthropology. We must rely on our own independent exertions. If the combination of the departmental sciences we advocate, should become generally accepted amongst the independent thinkers in the rising generation of university men, it will be the means of materially assisting our progress. Such men will come to us with all the vigour of youth, and, with the weapons of

logic, will act as the champions of truth and as lights for the diffusion of knowledge. Let those amongst us who may be inclined to take a desponding view of the difficulties with which our path has been, and still is, beset, take but a view of the state of the Science of Man in this country five years ago, and its condition now, and the result cannot but have the effect of inspiring them with satisfaction for the past, and with both zeal and hope for the future.

And here let me say that the limits fixed for the proper working of our own Society have not yet been nearly reached. After a careful consideration of the plans proposed for working the Society, it was ascertained that they could not be carried out in their totality unless our list of Fellows should number two thousand names; as yet it has not reached half that number. While some, therefore, are working at the scientific investigation of the different branches of our science, let others exert themselves to increase our numerical strength. There are very many really zealous and earnest Fellows of this Society whose time, talents, and, may be, money, are readily and freely given to promote the noble cause for which the Society was founded. Let others now follow their example.

We, at least, must not be open to the reproach of lukewarmness. Let us show that it is no phantom of the imagination which we are seeking, and that we are not impelled onward by fanatic zeal; but, at the same time, it behoves us to be, both in public and private, sincere and earnest in what we have undertaken, and to show that we do not leave to the upholders of dogmatic creeds the credit of being alone zealous in their daily life and duties. Science cannot be advanced by diletante investigations, nor by cold and timorous teachers.

We must be emphatic, truthful, and fearless; and we need not in that case anticipate anything but the ultimate fruition of our hopes—perhaps at a less remote period than it may seem to us now, when still surrounded by dangers and obstacles, which should rather stimulate us to farther exertion and greater zeal.

I will now proceed to call your attention, gentlemen, to a point of the highest importance in the development of our science. "Order," to employ the words of the poet, "gives all things view;" and, in anthropology, which embraces such a multiplicity of detail, and requires nothing so much for its progressive character as classification, order is beyond everything of most imperative need. Everything must be to hand—every minute fact, which may, at any moment, prove of vital importance to the whole structure of the science, must be available, as it may, from circumstances, be called to assume a prominent bearing upon new facts. We cannot tell what effect some seemingly inconsiderable circumstance may exercise, what ingenious framework of hypothesis may not be shattered to fragments, and what total reconstruction may be found needful. To encounter new facts with a cheering hope of their leading up to a new scheme of induction, we must be able at the instant to correlate them with all other known facts at our command. The right appreciation of the physical and social existence of man, demands the utmost vigilance and promptitude in applying the novel results of our researches, and a rigid application

of analytical criticism must in all cases precede our new and unexpected synthesis. We have not alone to record, we must be ready to apply the recorded results, careless whither they may conduct us, and with a stern disregard for preconceived ideas—no matter how venerable for antiquity, or hallowed by authority and prescript. Especially are such efforts required in such a single-hearted spirit, when we enter upon the broad, and, as yet, somewhat indistinct field, of what has been somewhat loosely denominated the pre-historic era. Here every item assumes, for most cogent reasons, proportions as to importance, the most gigantic for good or for evil to society at large. These traces raise a question which sooner or later must be answered. What is the limit of history? if by history we mean our knowledge of the period and circumstances of man's existence on the globe. Have we indeed any right to say to the wave of evidence, thus far and no farther, in history, as in other branches of human inquiry?

Of late years, the word "document" has received an extension of meaning for which there is much reason for satisfaction. A rock, a bone, a cranium, now, in scientific conversation, is as much a document as a written parchment or a printed statement. But some have spoken of the "documentary evidence" of pre-historic times. It may be objected that the use of the term archaic as a designation of any part of anthropology, anterior to the division of historical anthropology, implies some idea of a chronology more or less definite, and that the term "pre-historic" renders the same idea, but this is hardly the case. When we speak of pre-historic times, we are necessarily placing ourselves in a dilemma. How can that be pre-historic, of which we have evidence? It is only to circumstances utterly unknown to us in any sense of evidence at all, that we can apply the term "pre-historic"; whereas, when we employ the word "archaic", we cannot but associate it with the rudest efforts of man's civilisation—the designation historic implying a period or a set of circumstances to some degree expressive of a culture more or less polished—surroundings in which the subjective asserts its intellectual rank, and by which thought and its attendant development receives a definite representation. In this way we can justify the application of both terms without offence to the exact literality of either. At all events, the term "pre-historic archaeology" is a manifest tautology, and it is most likely that our three or four scientific brethren who at present make some use of the expression, will see that the designation "archaic anthropology" practically comprehends what they desire to convey, and avoids any confusion for the future. The term "palæo-ethnological" is open to the same difficulties, from almost the same reason, as we have at present nothing upon which to found racial distinctions, *per se*, among these very remote traces of man's existence. Is not this a contradiction in terms? Wherever we have documents, have we not history? If so, we must abandon the term pre-historic, or extend the denomination history, and apply it with confidence to a larger area of time. The present age, whether as regards India, China, Egypt, the Greeks, the Scandinavians, and others, is unquestionably in advance of the knowledge possessed at the beginning of the century, without drawing in any

way upon the resources furnished by drifts, explorations, lake-dwellings, kitchen-middens, barrows, tumuli or cave explorations. Yet, though what has been exclusively called *History* is dumb, the *facts* will speak on appeal, and a vast and yet partially unexplored field is the reward of those, who, in view of possible modifications of our knowledge, suspended their judgment. These facts even introduce us to a sort of chronology, and that brings us to the necessity of a stern scientific classification of man and his surroundings.

Even the wildest dreams of the most daring theorists cannot at present compass the origins of mankind, and it is a duty of the most urgent necessity to proclaim such a truth to all who desire to know rather than to believe, to understand rather than to submit in unhesitating acquiescence. The law of England having justly and wisely limited the memory of man to a definite period, that of the age of Richard the First, we, as students, not only of man, but of Nature, may, without shame, confess our inability to chronometrically limit the period of his being, and claim an exemption from the arbitrary imposition of a short fixed era for the duration and development of man's existence. By this means alone can we arrive at the threshold of the important inquiry into the earliest history revealed to us by recent discoveries. Some may think the time to be accepted as being of a most appalling character; but in the end it is our true guard against future error, and the loyal acceptance of the stupendous truths disclosed to us, is a moral necessity.

Any longer to palter with these facts is to place ourselves under the supremacy of the quite baseless traditions of the former barbarous inhabitants of Syria. As Anthropologists, especially, this duty of emancipation becomes pre-eminent; and while we frankly admit a period for man's existence to which we can assign nothing but that of the post-tertiary formations in geology, we consolidate and verify our position as men of science. I am here on the verge, therefore, of anthropological classification. Prehistoric times do not exist in reality; the idea conveyed is too vague, and the terminology does not fit our position, and when we survey the great branch of our science which has been called Archaic Anthropology, we find an excuse and a justification in the nature of the inquiry before us. There is much to satisfy the theorist, more to content the logician, most to impel the honest lover of truth for truth's sake, in the sincere adoption of, as it were, a boundless past for the investigation of man's earliest social and physical development. What the lake-dwellings give to us is far from unhistorical; the facts already ascertained point to a civilisation, however remote, analogous to that presented in later days, and the contemplation of them leads to deductions as to the future, equally weighty, equally breathing a spirit of progress for mankind in its infinite varieties and multiple forms. We are enabled to look this dead civilisation in the face with a firm confidence in the future of mankind; though empires have risen and fallen—though vast systems of society have taken root and spread, and then become engulfed in the reaction of barbarism, Man remains a cardinal fact in evidence of his invariable tendency to progress and to improvement. No tradition can here serve us, no

dogma confine us. We perceive the same irresistible impulses working in that clear past, that surrounds us on every hand now. Rudimentary as the science of that long past period may appear to us, it was the culmination of man's efforts then—the evidence of his strivings after a more orderly condition.

The farther we penetrate the earth's crust, the more cumulative is the evidence of the immense antiquity of the races of mankind, and the less do we feel disposed to adhere to the standards of tradition. Archaic Anthropology, the latest born of the great departments of our science, is destined probably to work the most beneficent change in our views of Man's being on this planet. Practically it must enlarge the minds of those to whom it is a source of interest and wonder, and tend to remove the acerbities forced upon the intellectual state of modern thought, by time-honoured assumption and venerable ignorance. By so doing will it not confer a great practical good upon society in every one of its ramifications?

The domain of Historical Anthropology, specifically so called, next claims our attention. Throughout the whole of man's career, the formation of language, the accretion of traditionary creeds, and the gradual development of systems of mythology take place, and it is of the highest importance that an adequate collection of facts of this class should co-exist with the investigation of Archaic Anthropology. There is a natural sequence in the arrangement assigning the second place in our science to Historical Anthropology: just as the former displays Man in the earliest times yet known, building up a physical economy, so this department illustrates the corresponding intellectual out-births of man's earliest views of the universe around him, and his relation to it. It forms a record of his earliest knowledge and beliefs concerning his history as a thinking being, and presents a solid substratum upon which to build Descriptive Anthropology, its natural issue. Notwithstanding the splendid results popularised to us by Max Müller in this department, the work still remaining is overwhelming. It is not only necessary to accumulate the evidence, but the subsequent process of correlation has to be entered on, if we are at any time to look forward to the vivid restoration of these remote ages. I can therefore only recommend, with great emphasis, the necessity for a comprehensive investigation into this series of evidence; from it, and it alone, can we hope for a reconstruction of early beliefs, and an intelligible idea of the interior life of early times. Intimately associated with the various forms of creed is the subject of superstition, magic, star and tree-worship, and charms, and a wide section of human thought is thus laid open to us. The origin of poetry, music, painting, and the finer arts of life, together with the literary development of early ages, appertains also to this division of our science. The birth of hieroglyphic and alphabetic writing is likewise to be placed here. The agglomeration of laws and the remote foundation of forms of government next succeed, and thus link Historical Anthropology with the science of Descriptive Anthropology, which properly forms the next stage of inquiry. Nothing displays the necessity for a formal study of mankind and its peculiarities, so much as this last.

Descriptive Anthropology is at no loss for materials ; every continent, island, and rock, abounds in races of men more or less interesting to the student of anthropological science. Into this sphere enter manners and customs, observances, manufactures, domestic habits, and the gradual introduction of peculiarities in dress and new forms of aliment. With the rise of the arts, ensues the necessity of commerce and the intermixture of alien races ; and here, in turn, Descriptive Anthropology gives place to the phenomena of Comparative Anthropology.

The consideration of hybridity (in a monogenistic sense), of the intermixture of races and their effects upon race character, insensibly conducts to that of man's animal nature as displayed on the globe at the present day, preparing the way for the craniologist, the osteologist, the anatomist, and the physiologist, and pointing to an ultimate practical application of all previously ascertained physical and social truths, in which the efforts of scientific men culminate and are completed. Here the proportions of anthropological science assume a magnitude and a value of inestimable service to the statesman and the ruler in whatsoever capacity his function of rule may be exercised. The family and the nation alike profit by the studies of the comparative anthropologist, and the mysterious link between mind and matter—in other words, between structure and function—receives illustration and interpretation at his hands. Thus and thus only, can Anthropology, the noblest of the sciences, receive the general approbation of mankind. It is by displaying the practical influence of our deductions that we can avert national calamities, explain oriental and occidental civilisations, and neutralise the effects of race-antagonism with its train of errors and mistakes. Here we become the companions of the philanthropist, the councillors of the statesman, the guides of the physician, and the interpreters of man's interior nature. To rightly merit this proud pre-eminence, all our efforts are needed, all our party feelings must be buried, all our favourite theories subjected to the touchstone of consistency, induction, and scientific criticism. It is not enough to proclaim generalities, but we must also descend into particulars. It will not suffice to raise a stately framework, the lacunæ must be supplied, the differences accommodated, and the inconsistencies—apparent rather than real—contrasted, and finally consigned to their true station. By a skilful and cordial co-operation, in such manner, can we ultimately hope for a universal recognition of the necessity of anthropological science throughout the civilised world.

There is one personal duty which I have to perform with mingled feelings of pride and sorrow. We have lost from the ranks of science four eminent men who in various ways and countries have striven for anthropology : you have heard memorial statements made this day respecting three of them, and at a later period we may anticipate to hear more of the important labours of Sir William Lawrence.

Finally, we have to rejoice that one great fact has happened. Two years ago, our President made an appeal to you and to the government to assist in rescuing our colleague, Consul Cameron, from the clutches of the Christian barbarian who rules over the races of

Abyssinia. You, no doubt, remember that a Fellow of our Society, Dr. Jules Blanc, went to try to procure the release of our colleague, and himself became a prisoner. We have at last to rejoice that a vigorous attempt is being made by the government to save our two Fellows and their companions from the doom which awaited them.

After thus congratulating the Society, allow me, in concluding this necessarily brief and fragmentary address, to express a hope that each Fellow of this Society will address himself seriously to the presentation of facts in one or other of these sections of our science, and that it should be considered most important to contribute in ever so small a degree to the stores of our general knowledge. It would be idle to attempt to conceal from ourselves the fact that the name of anthropology has met, and has yet to encounter, the bitter hostility of very large and influential classes of society. To avert our eyes from this fact would be foolish ; to stem the tide of opposition, calumny, and ridicule, we require only determination and perseverance, and to know our own minds. Our science depends, for its triumph in its character of a combination of other practical sciences, upon the efforts of individuals, and we must be prepared to encounter opposition while we are compelled to the task of clearing away the accretion of rubbish and misrepresentation which ages have unfortunately accumulated. But we must not fail in loyalty to ourselves, and we are sure of success. With steadfast confidence in the good faith of our researches, we may show an undaunted front to our opponents :—

“Stand we calm and resolute,
Like a forest close and mute,
With folded arms, and looks which are
Weapons of an unvanquished war.”

Shelley, “Masque of Anarchy.”

This, in conclusion, I am bound to say ; during our short existence much has been done to show how vast is the field before us ; much has been accomplished towards the establishment of method and order in our ranks, and to those who have worked early and late for the realisation of a portion of our science, our thanks are due. Let us not, gentlemen, be ungrateful to the eminent men abroad and at home who have so enlarged the sphere of our knowledge, but by a subdivision of labour, emulate their example.

For myself, I thank you for the attention with which you have honoured me. I shall ever seek to act upon the recommendations I have ventured to make, so that my preaching may be illustrated by my practice.

A unanimous vote of thanks was given to the Treasurer for his address.

The TREASURER briefly returned thanks.

Mr. A. C. BREENER moved that the thanks of the Society be given to the retiring members of the Council, Colonel Lane Fox and Mr. Hotze, for their services during the past year.

Mr. BRABROOK having seconded the resolution, it was unanimously carried.

Mr. MACKENZIE proposed that a vote of thanks be given to the President and Vice-Presidents for their services during the year 1867, which was seconded by Mr. GEO. BRYANT, and carried unanimously.

A vote of thanks was proposed and seconded to the Director and Treasurer for their services during the past year, and carried unanimously.

The TREASURER returned thanks.

Mr. SNELL proposed a vote of thanks to the Auditors, it was seconded by Mr. J. W. CONRAD COX, and carried unanimously.

Messrs. BROOKES and HARDING returned thanks.

The SCRUTINEERS then announced the result of the ballot to be as follows :—

Officers and Council for the year 1868. *President*—Dr. James Hunt. *Vice Presidents*—Dr. Berthold Seemann ; Dr. R. S. Char-nock ; John Beddoe, Esq., M.D. ; J. Barnard Davis, Esq., M.D. ; H. G. Atkinson, Esq. ; Sir G. Duncan Gibb, Bart. *Director*—E. W. Brabrook, Esq. *Treasurer*—Rev. Dunbar I. Heath. *Council*—H. Beigel, Esq., M.D. ; William Bollaert, Esq. ; Henry Brookes, Esq. ; W. C. Dendy, Esq., F.R.C.S. ; S. E. Collingwood, Esq. ; J. W. Conrad Cox, Esq. ; J. Langdon H. Down, Esq., M.D. ; George Harris, Esq. ; J. Meyer Harris, Esq. ; Henry Wm. Jackson, Esq. ; Richard King, Esq., M.D. ; Viscount Milton ; Major S. R. I. Owen ; Captain Bedford Pim, R.N. ; C. Robt. des Ruffières, Esq. ; Wm. Travers, Esq., M.B. ; W. S. W. Vaux, Esq. ; E. Villin, Esq. ; C. S. Wake, Esq. ; C. Walford, Esq.

Mr. H. G. ATKINSON proposed and Mr. SNELL seconded a vote of thanks to the Scrutineers, Dr. Hyde Clarke and Sir G. Duncan Gibb, Bart., for their services.

The proceedings then terminated.

FEBRUARY 4TH, 1868.

DR. JAMES HUNT, THE PRESIDENT, IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The Fellows elected were announced as follows :—James Anderson Rose, Esq., C.E. of 11, Salisbury Street, Strand ; Dr. Donovan, of 111, Strand, W.C.

The presents received since the last meeting were :—

FOR THE LIBRARY.

From the AUTHOR—Civilisation considered as a Science, by George Harris, F.S.A., F.A.S.L., P.M.A.S.

From the ROYAL NORTHERN UNIVERSITY OF CHRISTIANIA—Beretning om Sundhetstilstanden og Medicinalforholdene i Norge, C. No. 4, i. Aaret 1864. Tabellen over de Spedalske i Norge i Aaret 1865. Generalberetning fra Gansfad Sandssyge asyl for Aaret 1866.

From CHARLES HARDING, Esq., F.A.S.L., F.S.S. Colquhoun's Wealth, Power, and Resources of the British Empire.

- From the AUTHOR—Flint Implements found at St. Mary Bourne, by Joseph Stevens, M.R.C.P.
- From the SOCIETY—Transactions of the Geological Society of Glasgow.
- From the EDITOR—Medical Press and Circular, Vol. v, Nos. 3 and 4.
- From the WAR DEPARTMENT OF THE UNITED STATES OF AMERICA, SURGEON GENERAL'S OFFICE. Report on Amputations of the Hip-Joint.
- From the EDITOR—The Farmer's Journal, Dec. 1867.
- From the SOCIETY—Proceedings of the Philosophical Society of Glasgow, No. iii.
- From the SOCIETY—Proceedings of the Royal Society, Vol. xvi. No. 97.
- From the SOCIETY—Bulletins de la Société d'Anthropologie de Paris, Vol. 2, 4 fasc.
- From the SOCIETY—Transactions of the Ethnological Society, Vol. vi, New Series.
- From the ACADEMY—Transactions of the Imperial Academy of Sciences of Vienna, Vols. 55, 56, 1867, I, II, Almanack, 1867.
- From Dr. CARL VON SCHERZER—Reise der Oesterreichische Fregatte Novara um die Erde.
- From the AUTHOR—G. Nicolucci, Sull' *Anthropologica della Grecia*.
- From the AUTHOR—Italian version of Dr. Barnard Davis on a Skull.
- From the AUTHOR—Observations on the Phenomena of Life and Mind, by R. Dunn, M.R.C.S.
- From S. E. COLLINGWOOD, Esq. F.A.S.L.—On the Defective Morality of the New Testament, by Francis W. Newman.
- From A. C. BREBNER, Esq., F.A.S.L.—Colonel Sykes' Traits of Indian Character.

FOR THE MUSEUM.

- From Dr. KOPERNICKI—Drawings and Measurements of Skulls.
- From Prof. BOGDANOFF, PRESIDENT OF THE ANTHROPOLOGICAL SOCIETY OF MOSCOW, Honorary Fellow A.S.L.—Four Casts of Skulls from Moscow Tumuli. Photographic Album of Anthropology. Ethnographical Exposition of Moscow.

On the motion of the PRESIDENT, the thanks of the Society were given to Professor Bogdanoff, of Moscow, for this contribution of so extensive a series of photographs of natives of Russia, and the Director was requested to read the letter accompanying the present.

Dear Sir and Colleague,—In a letter which I had the honour to address you from Paris, in thanking you for the honour which the Anthropological Society of London had done me, I announced to you the dispatch of some anthropological objects for the Society. It is only now that I am enabled to realise a portion of my promise, and I have just now sent off a case to you with those objects which I beg you to present to your honourable Society. This case contains:—

1. A photographic album of the natives of Greater Russia.
2. An album of photographs from the Ethnographical Exposition of Moscow, 1867.

3. Four casts of crania from the tumuli of Moscow, which I have already described in a work formerly presented to the London Society.

I should add that these casts were taken in my absence, and the selection of specimens was not sufficient, as there exist some abnormal forms among the casts. When I return to Moscow I shall have some fresh casts taken from those crania which appear to me the most typical, and I shall have the honour to present them to the London Society. The Society of Moscow, of which I have the honour to be President, will be delighted to maintain continuous relations with the London Society, and to be useful to it by concurrence in the common pursuit.

If you will have the goodness to acquaint me with the arrival of the case, pray address the letter to Giessen to the care of M. Leuckart, who will forward it to me. Accept the assurance, sir, of my most distinguished sentiments.

Giessen, 10 January.

ANATOLE BOGDANOW, Hon.F.A.S.L.

The DIRECTOR then said—I have been instructed by the Council to communicate to the Society the particulars of certain arrangements which the new Council hastened to make at its very first meeting. They desired to secure the following objects :—1st. The increasing the general efficiency of the Society's working, and the scientific value of its labours. 2nd. The inducing individual members to co-operate actively with the Council in obtaining this object. 3rd. The giving individual members a more intimate acquaintance with the practical business details of the Society's working. 4th. The organising systematic measures for obtaining a constant supply of valuable scientific papers, and for getting the Society well represented at the meetings of the British Association and the Congrès International d'Anthropologie et Archæologie Préhistoriques. These objects, it appeared to the Council, would be best obtained by creating a system of Committees (each embracing one of the important departments into which the business of the Society divides itself) on which not only members of the Council, but others from the general body of the Society, should be invited to serve. The Council, therefore, contented itself with nominating the Chairman, Vice-Chairman and Secretary of each such Committee, leaving it to volunteers from among the members generally to come forward and supply the consultative body.

The Committees so formed are ten in number, distinguished by the letters A, B, C, D, E, F, G, H, I, K. Committee A is of course devoted to that which must necessarily have the foremost consideration in all matters relating to practical business efficiency, viz., Finance. Committee B, as before, will regulate our Publications. Committee C has a new and interesting function,—that of suggesting subjects on which papers should be invited from those most qualified to give them in each case. This committee will from time to time review the political questions of the day, and the various matters of interest that possess the public mind, and will consider whether our science is not capable of throwing a practical light upon them. Committee D will be entrusted with the organisations preparatory to the

meeting of the British Association ; and if their work be well done, as I have no doubt it will be, I anticipate as successful a campaign at Norwich as that which, under so many disadvantages, our President achieved for us last year at Dundee. Committee F will inquire into the qualifications of gentlemen proposed as local secretaries ; and will suggest names for appointment in places where as yet we are not represented. The remaining committees have distributed among them the various branches of our science, and their duty will be, in each case, to report upon the papers submitted for reading in that particular branch ; to endeavour to induce Fellows to contribute papers ; and generally to watch over and promote the scientific efficiency of the Society in their respective departments. These are G—Archaic Anthropology. H—Historical Anthropology. I—Descriptive Anthropology. K—Comparative Anthropology.

The Council authorise me to say on their behalf, that they trust every working member of the Society will be willing to assist them, by enrolling himself under one or other of these Committees, and that they thus hope to secure increased usefulness and prosperity to the Society's operations.

Mr. BLYTH made some remarks on a very fine specimen of a polished celt, dug up at Lower Tooting, which he exhibited to the society ; and he also exhibited a curious specimen of a spoon, from Upper Martaban, which was passed round for inspection by the members present, who were required to give their opinion of the material of which it was made,—whether it was animal, vegetable, or mineral. He afterwards explained that it was the beak of a young hornbill, which had the appearance of a manufactured spoon.

The President then delivered the following Address.

The President's Address.

GENTLEMEN,—On taking the chair, for the second time, as your President, I feel it my duty to address a few words to the Fellows of the Society on the present aspect of its affairs ; and also, at the same time, to thank you for this fresh expression of your sympathy and approval for my past efforts on behalf of the Society.

I assume the office of your President to-day under somewhat exceptional and unusual circumstances. As many of you already know, it is by no free choice of my own that I am again called to preside over the affairs of this Society. The unexpected difficulty in finding a successor to my friend and predecessor, Captain Burton, induced my colleagues in the Council unanimously to call on me to again take the office of President. Under the circumstances in which the Society was placed, I did not feel justified in refusing to comply with their wishes ; although I frankly confess that I should have been better pleased had their choice fallen on some other Fellow of our society.

As, however, I again find myself your President, and as I was not able to attend at the Annual Meeting, I beg now to offer to your consideration a few points which appear to me to be, at this time, deserving of our most serious attention.

The history of scientific societies in this country is generally pretty nearly as follows. During the first three or four years, the novelty of the formation of a new scientific society attracts a large number of persons to join it in the hope of getting some "new sensation." The novelty, however, soon ceases, and trials begin. The managers, during the first few years of the flourishing existence of such societies, are led to embark in various undertakings on the strength of the large number of Fellows on their list. There is, however, unfortunately prevalent in our day, a very low state of morality amongst those who, from motives of their own, are the foremost to join a new scientific society; and this class of members, I regret to say, usually decline to pay their obligation for expenses incurred in their behalf. There is also, I understand, a prevailing impression abroad that this society is likely to be no exception to what has too frequently been a general rule. Some of our friends, I am told, have given this impression too much weight; and some, who have never been friendly to us, have made it a ground of attack.

But while we entertain a merited contempt for the opposition which is offered to our Society, either from the public or from semi-scientific men, we cannot be too careful to make ourselves thoroughly masters of what is our present position.

I trust that by our united efforts we may ere long be able to declare that our financial and scientific position is both consolidated and finally and permanently assured.

Mr. BRABROOK (the Director) moved, and Mr. MACKENZIE seconded, a vote of thanks to the President for his Address; which was carried unanimously.

The PRESIDENT, in acknowledging the compliment, expressed his desire to discharge the duties of the office, to which he had been re-elected, to the best of his ability, and in such a manner as to give satisfaction to the Society.

Sir DUNCAN GIBB, Bart., M.D., then read the following paper, which was illustrated by several diagrams representing the organs of the throat on an enlarged scale.

Vocal and other Influences upon Mankind from Pendency of the Epiglottis. By SIR DUNCAN GIBB, Bart., M.D., LL.D.

(The following is an abstract; the paper will appear at length in the *Memoirs*.)

In a series of inquiries, carried on during the past six years, the author had examined, with the laryngoscope, 4,600 healthy persons of all ages, both sexes, and varying positions in life, and he found that in 513, or 11 per cent., the epiglottis, or cartilaginous valve, situated at the top of the windpipe, was pendent, in place of its usual vertical position. In many persons this pendency was found to be hereditary, and in others it was acquired. This peculiarity gave rise to certain influences which were described, as observed in Europeans; and they consisted in a modification of the natural voice, which tended to a bass tone in adult males; a material alteration in the singing voice, and in some females, inability to produce the higher notes, and in others the power and compass of the voice were weakened. The author never knew a great female singer to possess a pendent epiglottis. The direction of the voice, in cases of erect and pendent epiglottis, was contrasted. Girls with pendency could never become good singers unless it were remedied. Other influences, of a constitutional nature, were dwelt upon; with the liability of persons with pendency to contract the prevailing epidemic diseases, and the means to remedy the evil in upwards of 3,000,000 examples in Britain alone. The author had examined two hundred and eighty healthy Asiatics and Africans, and in them pendency was found to be much more frequent than in Europeans.

The thanks of the meeting were unanimously given to Sir Duncan Gibb for his paper.

The Rev. DUNBAR HEATH said he was anxious to inquire, before the many medical men present rose to discuss the paper, whether the author did not think the pendency of the epiglottis a racial character, or whether it had not at least a tendency to become so? Hitherto, racial differences had not been established among men; but Sir Duncan Gibb had before shown that there is a peculiar difference between the Negro and European in one instance, and he had now indicated another. If the peculiarity noticed by Sir Duncan Gibb in the epiglottis be found to be racial, he would have the merit of discovering two new racial differences in his anthropological investigations, equal in importance to the discovery of two new planets in astronomy. When these and other differences are established, we should be in a better position to write the natural history of man, and more able to judge whether or not these varieties proceed from a common origin. The Rev. Dunbar Heath alluded to the bearing of these discoveries on one of his own theories respecting the teaching of the Kitchen-middeners by the Aryans, as they would serve to explain the results of one race of man teaching language to another.

Mr. BLYTH said the paper presented a new idea as to the peculiarity noticed in the epiglottis of different peoples; but it appeared to him

that the difference was not so much due to difference of race as to difference of climate. He said it must have been observed by all who have resided in India, that no native of the tropics has a musical voice; but the question was, how far the peculiarity depended on temperature or on race. The Chinamen were very different among themselves; those of the south being different from those of the northern parts of the empire. He adduced Chang, the Chinese giant, as a good specimen of the northern Chinese in general character, he being very different from the Chinese of the south. Before, however, any satisfactory generalisation on the subject could be arrived at, it would be requisite to examine a much larger number of cases than Sir Duncan Gibb had had the opportunity of doing.

Mr. DENDY agreed almost entirely with Sir Duncan Gibb; but he thought he had not examined into the first causes of the peculiarity noticed so much as he ought to have done. He did not consider the term pendent epiglottis a correct one. If the epiglottis were pendent, it would sink down into the larynx. Prostration of the epiglottis, he thought, would be a more proper term for the peculiarity; and he suggested that that term should be substituted for pendency. The cause of the prostration he attributed to innervation of the epiglottis, and that it was not a quality of the epiglottis itself. Persons in a state of tremor are deprived of their customary vigour by innervation, of which there were many instances, especially in children. There were, for example, cases of cerebral croup, which were not regular croup, though they exhibited all the symptoms of croup, and were produced by want of nervous energy, which was often the case during dentition. Loss of voice was also sometimes occasioned by hysteria. He believed the peculiar prostration of the epiglottis observed in the Chinese was hysterical; and that they were not capable of high intellectual exertion in consequence of racial hysteria. He mentioned, as a remarkable instance of the loss of voice from hysteria, the case of a young lady who was afflicted with sudden aphonia, and could not speak in consequence of innervation. He recommended her father to give her some excitement; and he consequently took her to the Exhibition, promising to give her anything she named. She was much struck with the brilliancy of a large diamond, and expressed her wish to have it. By the excitement thus produced, the epiglottis was lifted up, and she has been well ever since.

Dr. BEIGEL said, that though he admired the painstaking and perseverance of the author of the paper, he could not arrive at the same conclusions. He wished to know what was the normal condition of the epiglottis, and whether there was a certain angle at which it should be placed. It would be important also to know at what time pendency begins. If that were known, then he was of opinion that most of the conclusions of the author of the paper were right. He had seen all kinds of pendency, and of erection of the epiglottis, in perfectly healthy persons. If that were so, a diseased condition could not be perceived by the pendency of the epiglottis; and he had never seen any ill consequences arise from this pendent condition. He had had patients who had no epiglottis at all, and yet the voice was not

affected by its absence. No conclusion, he thought, could therefore be drawn as to the importance of the state of the epiglottis on the general health. He differed also from the opinion as to the influence of the soft palate on the voice; and contended that it had been shown by experiments that the soft palate, attached to the hinder part of the larynx, had no relation to the voice. With regard to the effect of a hot climate in making the epiglottis pendent, he thought that effect was produced by the more frequent breathing which, it is well known, takes place at high temperatures; and that if the epiglottis were in a normal condition, it might be rendered pendent by that cause. It could not, therefore, be accepted as indicating a difference of race; nor was he inclined to attach much importance to the form of that membrane. As to the explanation given by a preceding speaker, that the pendency of the epiglottis was produced by innervation, he considered that a difficulty had arisen in mixing together the conditions of the vocal chord with that of the epiglottis, which were distinct organs. In families subject to hysteria, any disease deprived persons of their voice for days or weeks together, and after a time it was suddenly recovered.

Mr. McGRIGOR ALLAN inquired whether any experiments had been made to ascertain whether the peculiar voice of the North Americans is attributable to the state of the epiglottis. He remarked that Negroes, in whom the pendency of the epiglottis had been generally observed, have a very musical voice.

Dr. PEARCE thought Mr. Dendy's explanation of the cause of the pendency of the epiglottis was very satisfactory; and that it was an abnormal condition rather than a racial difference. He had observed that a state of exhaustion produced a depression of the epiglottis, and he was convinced, indeed, that that condition is to be regarded as entirely abnormal. It was desirable to ascertain whether it existed in diseases of the chest; and where it was considered that these diseases had greatly increased, if they were connected with the state of the epiglottis, it was not surprising that 11 per cent. of the population were affected by the state of that membrane. If it were an abnormal condition connected with chest-disease, there ought to be found a much larger proportion in that condition.

Mr. BOLLAERT said that his long experience of the natives of South America enabled him to speak of the remarkable absence of the power of producing musical sounds, and if the want of that power be owing to pendency of the epiglottis, they must have it in a supreme degree. He should be inclined to think it a racial characteristic. He had often tried in vain to make the Indians sing. They could howl, but they could not scream. They were astonished to hear him sing, but they could not imitate him.

Mr. MACKENZIE asked Sir Duncan Gibb in how many cases it had been ascertained that the pendency of the epiglottis had been perpetuated from father to son, and to what degree did it appear hereditary in more remote cases?

Dr. DUDGEON wished to know whether Sir Duncan Gibb considered the pendency of the epiglottis as a pathological state; for he stated

in the paper that most of the persons he had examined were perfectly healthy, but that it was a predisposing cause of disease. He had given no statistical statement as to the effect of pendency; but had only stated his impression that it was a predisposing cause of diseases of the throat generally. He conceived that the effect of the pendency of the epiglottis might be spasmodical, and that it might be produced in nervous persons by being called on to open the mouth to have the throat examined, and that in many of the cases mentioned the pendency observed might have been so caused. If that were so, it would make a great difference in the importance of the phenomena. The best plan would be to give statistics of those with pendency of the epiglottis and of those without it.

Mr. ALEXANDER C. BREBNER said—There are several points in reference to the very interesting paper we have just heard from Sir Duncan Gibb, upon which I should be glad to have some information if time permitted. Does the epiglottis exercise any influence or act in any way on the faculties of speech? Are there any proofs *pro* or *con* on the subject? If the epiglottis exercises any influence on the faculties of speech, its pendency in the case of Asiatics or Africans, etc., as mentioned by Sir Duncan Gibb, may be explained on the doctrine of disuse, as all who are acquainted with Asiatics or Africans, etc., know that their character in general is that of quiescence, amusing themselves by smoking or chewing intoxicating or stupefying matters, or sleeping, if left to themselves, but very little addicted to conversation, except, of course, in exceptional cases; whereas amongst Europeans, etc., or their descendants, the characteristics of activity and general loquacity are very strongly marked. Has Sir Duncan Gibb any statistics of the percentages of males to females in the case of pendency or non-pendency of the epiglottis? these would be most interesting in the discussion of whether pendency or non-pendency of the epiglottis is a racial distinction or not. In the case of marriage, the statistics of the pendency or non-pendency of the epiglottis, would also be most useful in the case of mutual selection of partners; if the pendency or non-pendency of the epiglottis has any direct influence on speech. Has Sir Duncan Gibb also any statistics of the pendency or non-pendency of the epiglottis in the case of the chimpanzee, gorilla, or any of the other inferior animals similar to man in their construction, etc.? these would also be very useful in the consideration of the point as a racial question.

Mr. A. L. LEWIS then offered a few remarks.

The PRESIDENT said there could be no doubt that, whatever might be the result of the consideration of this question, Sir Duncan Gibb had presented a very suggestive paper that might lead to important consequences. He was somewhat startled at the statement made as to the general prevalence of a depression of the epiglottis among Asiatics, which fact remained to be explained. He would also ask whether it was not found that such peculiar condition occurred most frequently in connection with a relaxed state of the uvula and surrounding organs. Mr. Dendy had spoken of aphonia and aphasia as if they were the same, but they were essentially distinct diseases, the one being

a disease of the brain and the other being entirely a local affection. The President observed that the paper would no doubt attract much attention, especially on the continent, quite as much so indeed as the former one with which Sir Duncan Gibb had favoured the Society, on the structure of the larynx ; though many of the opinions remained to be confirmed.

SIR DUNCAN GIBB, in reply, was not prepared to say that pendency of the epiglottis in Africans and Asiatics would necessarily constitute a racial difference, as the Rev. Dunbar Heath believed, although he was disposed to think the peculiarity was pretty general amongst them. He had no doubt but that in the beginning, all the races of mankind had their epiglottis erect, and that the pendency in some became acquired, and then hereditary in many. He was inclined to agree with Mr. Blyth that there might be a difference in the frequency of pendency between the natives of the north and south of China, and very probably the natives of the northern parts of Asia might have their epiglottis less pendent than in the more southern portions. His (Sir Duncan's) observations had been chiefly confined to the inhabitants of temperate climates. He was glad Mr. Dendy agreed with him on the whole ; but he could not accept the term prostration as a more suitable one than pendency to denote the position of the epiglottis. The meanings of the two words are widely different, and the latter not only expressed accurately the position of the cartilage, but it was now received as an accepted term. Innervation had nothing to do with pendency as a cause, and he denied that *laryngismus stridulus* was produced by innervation of the epiglottis. In that disease, it is the glottis, and not the epiglottis that is at fault ; indeed, the epiglottis may possess its natural position and the disease occur, from innervating causes, no doubt. So also in hysteria with aphonia, the epiglottis is not pendent ; the hysteria in the Chinese might be racial, as Mr. Dendy said, and there the pendency might influence it. Mr. Dendy's example of aphonia was clearly hysterical, and not dependent on pendency ; indeed it had nothing to do with it. He could assure Dr. Beigel that he had wholly excluded irregular or incomplete pendencies from his statistics, and that complete examples only were calculated. Dr. Beigel's reference to an instance of total loss of the cartilage only confirmed what he (Sir Duncan) had been stating regarding the voice, for the voice was not altered at all in such examples of destruction, from whatever cause, and no obstruction was therefore offered by pendency to the free passage of air in vocalism. Whilst he admitted the truth of Czermak's experiments, referred to by Dr. Beigel, in regard to the position of the soft palate in the utterance of vocal sounds, for he had confirmed the truth upon his (Sir Duncan's) own person ; still they did not apply to the utterance of the same sounds in pendency of the epiglottis, for indeed they could not always be produced, at any rate with anything like intensity or clearness ; consequently in pendency the voice struck the back of the pharynx behind the soft palate. And in young people, for this reason, they could not become good singers until pendency was overcome. Sir Duncan could not accept in any way the analogy between a crooked nose and pen-

gency of the epiglottis. In answer to Mr. McGrigor Allan's question concerning the cause of the peculiar shrill and nasal tone of the voice in Americans, he would state that pendency of the epiglottis had nothing whatever to do with it. He had examined many Americans of both sexes, and found the cartilage vertical where the nasal twang was undoubted. It was an acquired habit, and no doubt was an analogue of the voice in many of our own provincial districts. Whilst he would admit that some negroes might have musical voices, they had not loud powerful ones, from the pretty general condition of pendency in them. Whilst looking upon pendency as an undoubtedly abnormal condition, equally with Dr. Pearce, yet it is not the cause of loss of voice in cholera, diphtheria, or other diseases, as Dr. Pearce supposes, in combination with loss of nervous power. The latter might certainly give rise to it, in addition to the great amount of prostration present. Pendency of the epiglottis, Sir Duncan said, was not unfrequently seen in cases of bronchitis and asthma, but it was not by any means so frequent in consumption as Mr. Pearce might suppose, unless indeed there was true laryngeal disease associated with the chest malady. The observations made by Mr. Bollaert concerning the voice of the red man in Central America and elsewhere, were of great value, and most interesting to the author of the paper, and Sir Duncan stated that in that race of people, the epiglottis must be pretty generally pendent, and as Mr. Bollaert remarked might really be racial in the Indian tribes. Their howling, but not singing or screaming, would favour this view. The war-whoop was a sound made by striking the mouth with the hand during the emission of sounds, and would have a sort of compressed shrillness about it, favoured by the pendency. Sir Duncan could not then say exactly in how many cases he had found pendency hereditary, in reply to Mr. Mackenzie, but the number was quite sufficient to establish its truth. In answer to Dr. Dudgeon, pendency is abnormal in Europeans, or pathological if he wishes, but as it is found in so many healthy persons, abnormal is a better term. It is a predisposing cause of disease, as experience has convinced Sir Duncan over and over again. Medical or pathological statistics have been rigorously excluded from the paper, because all the cases given were healthy people or nearly so. Its determination in the young beforehand, and rectification will ward off danger when disease of any kind occurs, more especially in any of the exanthemata. Spasm was not the cause of the pendency in any of the author's cases, for reasons which he had given in describing his examinations. In reply to the President, he stated that certainly it was frequently found in Europeans who suffered from relaxed and congested throats, but, as before stated, he had avoided pathology in his paper. He had not had the opportunity of examining any of the lower animals with the laryngoscope, nor did he think it possible, unless Mr. Brebner could suggest some mode by which they could be held, to prevent resistance or biting.

The meeting was then adjourned to the 18th instant.

FEBRUARY 18TH, 1868.

DR. JAMES HUNT, THE PRESIDENT, IN THE CHAIR.

The minutes of the preceding meeting were read and confirmed.

The Fellows elected were announced as under :—Edwin Ransom Esq., F.R.G.S., of Kempstone, near Bedford ; Charles H. E. Carmichael, Esq., B.A., Trin. Col. Oxon., of the Department of MSS. British Museum ; Edward Murray, Esq., 27, Mulgrave Terrace, Gateshead ; William Edwardes-Schneegans, Esq., 26, Devonshire Street, Portland Place ; Edmund Walter Coleman, Esq., M.D., R.N., of the Royal Hospital, Haslar ; Lieutenant John Fletcher Owen, R.A., of Shoeburyness, Essex ; J. Hewitt, Esq., 3, Crown Court, Threadneedle Street, E.C. ; and Oswald Bloomsfield Howell, Esq., of 39, King Street, Cheapside, E.C.

The following presents were announced.

FOR THE LIBRARY.

- From the AUTHOR—Leon van der Kindere, *De la Race*.
 From KENNETH R. H. MACKENZIE, Esq., F.S.A., F.A.S.L.—*Case and Claims of the Emancipated Slaves in the United States*.
 From the AUTHOR—*Harmony of Revelation and Science*, by the Rev. J. Doyle, M.A., F.A.S.L.
 From the INSTITUTION—*Journal of the Royal United Service Institution*, No. 46.
 From the EDITOR—*The Medical Press and Circular*.
 From E. T. R. TENISON, Esq., M.D., F.A.S.L.—*British Medical Journal for 1866 and 1867*.
 From the AUTHOR—*Instructions pour le Littoral de la Mer Rouge. Mémoire de Docteur Boudin, par M. Périer*.
 From GEORGE TATE, Esq., F.A.S.L.—*Proceedings of the Berwickshire Naturalists' Club*.
 From J. W. CONRAD COX, Esq., F.A.S.L.—*M. Renan, l'Allemagne et l'Athéisme*, by Ernest Hello ; *Voyage d'exploration dans le Haut Maroni*, by M. Vedal ; *Eloge de M. Récamier*, by Henri Gourand.
 From the SOCIETY—*Proceedings of the Royal Geographical Society*, Vol. III, Part I.

FOR THE MUSEUM.

- From E. T. R. TENISON, Esq., M.D., F.A.S.L.—*Ring Money*, from Bonny, two specimens ; *Carved Calabash*, from the Congo ; *Snuff-Box*, from Old Calabar ; *Powder Flask*, from Benin.
 From Dr. DONOVAN, F.A.S.L.—*Cast of Human Brain* ; *Cast of Brain of Dog* ; *Cast of Gorilla's Brain*.

The PRESIDENT directed attention to a specimen on the table closely resembling a stone celt, which had been found near Bury St. Edmunds, by Mr. Henry Prigg, Jun. It was difficult to decide whether it was a natural production or artificial. It was accompanied by the following letter :—

On a ground Stone Implement, from Flempton, near Bury St. Edmunds, Suffolk.

Early last year, while searching for flint implements in a gravel pit at Flempton, about five miles from Bury St. Edmunds, I found the curiously-shaped stone which I now exhibit, and which doubtless, at the present time, when the ground stone axe found in the gravel pit at Malton is causing some little controversy, will interest those who make archaic anthropology their especial study.

Flempton, I should add, is situated in the valley of the Larke, between Icklingham and Bury St. Edmunds, at both of which places flint implements have been found in the "Drift," and the pit, in a heap of gravel near some working in which I found my specimen, is upon the upper level gravel, which there reposes directly upon the chalk. No flint implements have to the present been observed, though mammalian remains occur occasionally.

The stone in question is four inches and a half in length, by about three in greatest breadth, and has a thickness of three-quarters of an inch. I am at present unable to name the rock to which it belongs, but may state that it is of a gritty nature, rather soft, grey in colour, with numerous groups of small black shining particles interspersed. In form it resembles considerably one type of ground stone axe found in Denmark, having a semielliptic edge at its broadest end, faces of equal convexity, and square converging sides. In fact there seems but little doubt that the specimen owes its form partially to the hand of man; whether it is merely a surface example or came from the undisturbed gravel must of course remain an open question, though from the situation in which I found it, its general water-worn appearance, and the fact of its being deeply stained and incrustured with the red soil of the pit, induce me to believe that it is of higher antiquity than the "Neolithic period," and might probably have formed a portion of the true gravel bed.

In conclusion, as the evidence in this and the other two cases of the reputed discovery of ground stone axes in the gravel undoubtedly is, it must, I think, cause us to pause before we accept the proposition that the men of the Drift-period had no ground stone tools, or that they were in such an utter state of barbarism as to be unable to manufacture such, and it must likewise stimulate those who like myself are seeking in the valley-gravels evidence of these, our very remote precursors, to look for other signs of them besides the now well-known flakes and hatchets of flint.

HENRY PRIGG, Jun.

Mr. CHARLESWORTH was of opinion that there was nothing about the specimen which admitted of its being considered definitely a human production. Even flints were often found which resembled natural forms, and if that occurs with such a material as flint, there was nothing remarkable in a soft stone being worn into a shape resembling an artificial implement. The material of the specimen on the table was very unlike that usually selected for the formation of implements.

Professor MACDONALD concurred with Mr. Charlesworth, observing

that he should hesitate to say that it possessed any of the characteristics of a genuine flint implement, both from the nature of the stone and its general form.

Mr. BLYTH thought it was artificial and not a natural production, but he doubted whether it was genuine.

Col. Fox considered it might probably be a pebble in the process of formation, but not finished.

A short letter from Dr. Carter Blake, being his first communication since his arrival in Nicaragua, was next read. In it he stated that he hoped ere long to give some account of the anthropology of Nicaragua in general. He had been investigating some ruined cities in the Chontales district, which were covered with hieroglyphic inscriptions.

Capt. PIM moved the thanks of the meeting to Dr. Carter Blake for his letter. He said he anticipated that communications of great importance to the Society would be received from him ere long, and that certain crania would be forwarded at the same time. He had seen the hieroglyphics on the buildings mentioned, but had not had an opportunity of examining them, which could be done by Dr. Carter Blake, to whom the Council of the Central American Association had directed that every facility should be offered for his investigations, and for adding to the scientific knowledge of that interesting district.

The DIRECTOR seconded the vote of thanks, which was carried unanimously.

The following paper on Darwinism and Anthropology, by Prof. Hermann Schaaffhausen, was then read :—

Darwinism and Anthropology. By Prof. HERMANN SCHAAFFHAUSEN.

The question has recently been much discussed in England, whether the theory of Darwin is adequate to explain the variety of human races, and the physical and mental development of the human species. We should not do violence to the phenomena in favour of any theory, but rather look upon the anthropological facts as the touchstone for the question whether the so-called struggle for existence and natural selection represent a universal law of nature. The study of human races, offers greater difficulties than that of plants and animals, because a new force, as it were, presents itself, namely, the intellectual activity of man, whose influence upon the physical conformation is as potent as any other determining human nature.

Many of the characters which distinguish human races, must be ascribed to climate, such as the colour of the skin, hair, iris, height and constitution of the body. It is the task of physiology to furnish the proofs for the correctness of this view, by studying the intimate relations between the activity of the organs and vital conditions. Many naturalists have, however, considered these physical qualities of human races, as independent of the influence of external nature; because, in the distribution of races over the globe, this dependence cannot always be traced, and because phenomena present themselves in opposition to the above view. Thus, it is said, tall men are found both in the torrid and frigid zones; the colour of the skin is frequently

found darker in high latitudes than under the equator. But it is easy to explain these apparent contradictions. Nature preserves certain characteristics with wonderful tenacity, which a certain climate has produced during a long series of generations, under other zones, and the preservation of such well marked characters by transmission, proves itself more powerful than the transforming action of another climate, which could only become dominant after the lapse of a period as long, and under the same circumstances, as was required for the original formation. That climate does produce peculiarities of organisation which persist long after the cessation of climatic influences, man furnishes more striking examples than any animal or plant, because his more perfect organisation renders him more independent.

It has at all times been recognised that man has to struggle for his existence with the climate, with the animal world, and with his fellow men. But this struggle is not necessarily the cause of an improvement of human nature; it frequently is merely subservient to a scanty sustenance of life. Even at this day we see savages preserving a miserable existence, as they have done for thousands of years past. The nomads of central Asia are, as regards their mode of life, described by Herodotus as we see them now. But in other cases the struggle for existence produces in the same region the greatest change of phenomena. Between the Euphrates and Tigris there certainly lived in the remotest time, as everywhere else, only savage people; then arose flourishing empires; but now predacious hordes rove again around the ruins of the Assyrian cities. The struggles of races and peoples with each other present a variegated spectacle, in which physical and mental power measure their strength with alternate results. Flourishing empires are overthrown by barbarians, and rude force vanquishes refined culture. But those who succumbed to the force of arms finally conquered by their language, their manners, and their culture. Elsewhere, again, we find the powerful sons of the primitive forests succumb before the weak descendants of civilisation. The progress of humanity does not, however, depend upon the display of rude force, however great may be the events it has produced in history; but upon the development of thought, and especially upon the progressive knowledge of nature, which no doubt can only be acquired by intellectual emulation.

The theory of natural selection has but a limited validity as regards the development of the human species. Aristotle has indeed, in his ideal state, provided that only the best should intermarry; but in human society the strong pair with the weak, the good with the bad. Altogether we cannot in nature trace such an intention as is kept in view in artificial breeding. As natural selection we can only designate the advantage of a better organisation, which manifests itself in many cases of propagation. But the advantageous or injurious changes of the organisation, will always in the first instance depend on the natural influences of the external world. The miserable emaciated forms of many Australian tribes, correspond with their scanty means of subsistence. When they are better fed they much improve in appearance without the intervention of natural selection. Some English naturalists recently thought that Darwin's theory contained the proof of the unity

of the human species, inasmuch as, according to Darwin, all varieties, species and genera proceeded from one species. But the weakest side of Darwin's theory is the assumption of a single origin of species and the denial of a *generatio æquivoca*, which leads to the assumption of a multiple origin, of equal or similar series of developments, in different regions and at different periods. With a multiple origin, two species standing in the same grade of organic development may very much resemble each other, and yet be of different descent. However much the South Sea negro resembles the Ethiopian of Africa, that is no reason why they should not be of different origin, when we see that in Asia as well as in Africa animal life has independently developed itself from independent forms up to the ape and man. Orang and gorilla are both anthropoid apes; but what proves their common origin? The assumption of a progressive development does not exclude the pluralities of human origin. No doubt, if the transformation of species be admitted, then the possibility of the origin of all human races from one pair must also be admitted; for if an amphibiun can become a bird or a mammal, surely a negro can become a Mongol or a Caucasian. But although the unity of human origin is quite possible, it is not probable, because the oldest traces of our species present already profound differences of type. The unity of the human species cannot be proved by the theory of Darwin; for he cannot produce any valid argument for the assumption that all primitive forces have only been created once. The progressive development of man from lower forms is not a fact because it may be deduced from Darwin's theory, but because the discovery of old crania proves it, by showing us the human brain in a lower grade of organisation than is found in the present inhabitants of the same regions.

According to Darwin, new races should be continually forming, whilst experience rather teaches that the diversities of races partly diminish by the equalising influence of intellectual culture upon the brain and skull. It would, however, be going too far to assert that all peoples will finally form one homogeneous race, for civilisation cannot annihilate the climatic diversities of the different zones, although it may partly moderate their influences. It is a double error of Wallace to maintain that Darwin's theory leads to the apparent contradiction, that man has a single origin and that he at the same time develops himself in the direction of unity. Darwin's theory only leads to the possibility of a single origin, which must not be confounded with a proof of it. A development of the human species in the direction of its unity does not in the least follow from Darwin's theory, but just the contrary. The equalising action of a progressive civilisation in all zones, and under different climatic conditions, has been altogether ignored by Darwin, because it does not in point of fact exist in plants and animals, but is a privilege of man, whose development by intellectual and moral forces, and corresponding organisation, obeys another and a higher law. So long as the animal nature predominates in man, climate and locality have an absolute influence over him; but with the awakening of intelligence arises a force which in the most distant regions strives to liberate man from the constraint

of nature, until finally on the highest scale of civilisation, as we may now observe it, the higher classes of human society among all peoples not merely adopt similar customs in dress, habitation, and alimentation, but prove by similarity of thoughts, feelings, and strivings, that higher unity of human nature, which though not expressed in the first origin of our species, yet, what is more important, gleams before as the glorious object of human development.

Dr. KING said he was decidedly against the Darwinian theory. Mr. Darwin's facts and figures would not bear examination, and he (Dr. King) agreed with the author of the paper on many points. Cross-breeds would be obtained in animals, but not in man. They might, indeed, obtain a certain amount of cross-breeds: thus there was a mixture of races in Canada with the Scotchman and the Zealander, and it was found that when the male was of the stronger race the breed was depreciated, but that when the female was the stronger there was a superior breed. Then again, as to the action of the brain and its dependence on quality and quantity, he held for quality and not for quantity, not only of the brain but also of muscle.

The PRESIDENT proposed a vote of thanks to the author of the paper, and he hoped the Society would be favoured with others from the same source. It had originated from a paper on Darwinism which he (the President) had read at the meeting of the British Association at Nottingham, a copy of which was sent to Paris, and Professor Schaaffhausen had written to express his agreement with the opinions expressed in it, in opposition to those of Professor Huxley, and other advocates of the Darwinian theory, for he contended that that theory, instead of leading to the unity of the human species, led to very different results. In consequence of subsequent communications on the subject with Professor Schaaffhausen, he was induced to contribute the paper.

The thanks of the meeting were then given unanimously to the author.

Dr. KING added to his former remarks that Dr. Prichard had at one time contended for the unity of the human race, but that latterly he had changed his opinion, and said that as a philosopher he could not agree to that opinion, but that as a Christian he must.

The Rev. DUNBAR HEATH said the question to be discussed had not been clearly stated. The proper question before the meeting, he thought, was, whether the struggle for existence among men leads to advantageous results. There were so many things involved in Darwinism that it became a question what Darwinism really was, for in the second part of the work by Mr. Darwin, just published, some most astounding views were announced. In the alleged general struggle for existence, one question left unsatisfied was, whether there was necessarily an advantage gained by the struggle? With man it was not merely a question of physical force, but of moral force, depending on the conditions in which society is organised, the operation of which must be detrimental. He instanced the law in France which prohibited men between the ages of eighteen and twenty-eight from marrying. By the operation of that law those men who are the strongest are forbidden to propagate the

species. This could not but be injurious to the race. The power thus excited was not physical but moral power, and the same kind of power was observable among animals, some of which exercise an influence over others entirely independent of physical force. He adduced as an instance the fact that a pack of hounds will take up the cry of one that may be insignificant in size, while they will disregard the barking of others. That influence was a power based upon sentiment, and among men a similar kind of power is based upon sentiment. There might be a great number of false sentiments, and much false morality, of which the French law prohibiting a man from marrying at the most vigorous period of life was an example ; and it could not increase the power of a country. But if they allowed that power could be based on sentiment, then it might lead to some advantages, if the true view of anything were only known, and men were able to put things at their right value. Right views, sentiments and morals it might be supposed could give great advantage to a body of men acting collectively, though single individuals could do nothing. It was the knowledge of the good effects of such influences that gave value to history and to religion. He could see no other foundation for what is valuable in religion than the impression that goodness should give advantage to those who practise it. There were human sentiments leading to good and to evil, and he thought it certain that good sentiments do give men an advantage over those who only know what is bad.

Dr. DONOVAN said he came to gain information about Darwinism, but neither of the preceding speakers had said anything about it. The question was, what is Darwinism? Mr. Darwin stated his opinion in two propositions, about which people talk much but give no information. The first of these propositions was that all species of human beings have descended from common parents, and that they have become modified by descent. The second proposition was, that all animals have been disseminated from four or five original stocks, and plants from a smaller number. That was Darwinism of which the paper was a summary, and those were the two questions before them : and he begged the meeting to deal with the question as Darwin had put it before the world. Darwinism resolved itself into those two propositions, and Mr. Darwin had the candour to declare that both propositions might be argued against. He proceeded to read passages from Darwin, when—

Mr. A. C. BREBNER asked which edition Dr. Donovan was reading from ; that being an essential point.

Dr. DONOVAN—The first book only.

Mr. BREBNER—Mr. Darwin has much changed since then. This is important.

Mr. CHARLESWORTH considered that Dr. Donovan was attempting to lead the meeting astray from the real question. They, on that occasion had nothing to do with the general question of Darwinism. The question was, how far does Darwinism bear on the origin of the human race? Dr. Donovan had said the paper was a summary of Darwinism ; this was clearly not the case.

Mr. DENDY said the meeting would feel obliged to the President if he would explain what was the real subject to be discussed.

The PRESIDENT observed that the subject for discussion was not what Darwinism is, for it was supposed that every person present knew that, but they should confine themselves to the arguments adduced and the facts enunciated by the author of the paper. If they proceeded to consider the two works of Darwin they would go away from the question of anthropology and be entering the domain of biology. It was for them merely to consider whether it threw any light on anthropology. Firstly, whether known facts lead to the supposition that man came from the same class as other mammalia, and secondly they had to consider whether there were any facts to show that the distinctions of races now observed were ever non-existent. The author of the paper told them that the progressive development of man is proved by the progressive development of the human skull, as exhibited in the lower forms which had been discovered. That discovery was mentioned as a fact, and it was one of the questions to which they had to direct attention. They had heard, over and over again, of the peculiar characteristics of the Neanderthal skull, as indicative of the former existence of a race of human beings of inferior mental organisation ; but a paper had been read before their Society, by Dr. Barnard Davis, to prove that that skull was merely an abnormal formation, though Professor Huxley was an eloquent pleader the other way. If that were so, the whole of the first question would be thus put aside, on which the author of the paper laid much stress, for that was the only specimen from which the animal origin of man had been traced. Here Dr. Barnard Davis and Professor Huxley, were clearly at variance. If they once left the royal road of facts it was impossible to say what theories might not have to be accepted, and they would get entangled in a mass of difficulties from which they would never be extricated. Darwinism had been said to be founded on the struggle for existence, but they might admit that the struggle for existence would produce great effects without admitting any of the theories of Mr. Darwin as to the origin of man or species. His disciples say that it must be so ; but they rely for that assumption merely on the struggle for life and natural selection. The second volume of Mr. Darwin's recent publication indeed says that the facts on which his theory is based have yet to be published. In considering the question of inheritance an enormous number of facts presented themselves, which indicated a certain number of laws, but Mr. Darwin was unable to lay down any distinct law in proof of his theory, and said we had better wait for further evidence. They should, therefore, keep simply to facts, and bear in mind that the real origin of man had yet to be discovered. All scientific men must assume that the origin of man was a question of physical science alone, therefore they ought to refuse the acceptance of Darwin's theory which leaves the question of man's origin, and the causes of the distinctions of different races where it found it.

Mr. BROOKES was somewhat puzzled, and wished to know what was the question before the meeting. The paper was headed "Darwinism and Anthropology ;" what, therefore, could Mr. Charlesworth mean when he said the paper had nothing to do with the theory of Darwin.

In point of fact there was nothing (he thought) in the paper but Darwinism. He considered it unphilosophical to attempt to discover the origin of man and to trace his changes to the present time. The proper course of investigation should be to look to existing races, and to endeavour to trace them backwards to preceding races. With regard to the struggle for existence, the meaning of it was the commonly recognised fact that the strongest will conquer; and it was merely an illustration of the theory that the present human races have attained the perfection they have arrived at by success in these struggles for existence for millions of years. The strongest had always prevailed and they had transmitted their strength to their immediate descendants.

MR. CHARLESWORTH referred to the first three lines of the paper as being the question the Society had to discuss, and observed that the author assumed that they knew what Darwinism was.

DR. COLLYER thought the condition of the earth in former periods was an important consideration in the question of the origin of species; for when the earth was in a state unfitted for high organisations, a low condition of life must have prevailed, but that as the surface of the earth became changed a different class of beings existed. There had been, he considered, a progressive development as the earth became fitted for higher forms of life, and that the condition of man improved with the improved condition of the earth for human existence. Difference of climate he had no doubt produced great effect. He contended that the negroes in America are superior to those of Africa, [Mr. J. MEYER HARRIS—No! No!] and that the quality of their brain was more dense. [Mr. J. McGRIGOR ALLAN.—Which is the most dense brain?] The brain of the European was more dense than that of the negro and its density is greater or less in the intermediate races, that of the white man being the densest.

MR. DENDY regarded the question of intellect as the great question to which the decision of the point under discussion must come. Ascending from living monads to the most perfectly organised beings, at which point did intellect become developed? In the ape every physical organ was nearly analogous to man, and the brain of the gorilla and the chimpanzee were closely anthropomorphous, the cerebrum of the latter overlapping the cerebellum. In what then did the intellectual difference consist? Did it depend on education? In the canary and the magpie there was something like intellect developed by education—at least it was imitation. Then why did not the chimpanzee speak? Why not teach it as dogs are taught, and give it food when hungry, and utter a word at the time, to ascertain whether by that kind of teaching the chimpanzee might not be made to speak. That would be the *experimentum crucis*, and he recommended the Anthropological Society, to institute experiments of the kind, and show that they were a Society of action and not merely of talk. He alluded to the Obonzo dwarf discovered in equatorial Africa, who approached as near to the chimpanzee as possible, and he observed that instead of searching in the miocene for the missing link between man and apes, it appeared that there was a close approximation in the

centre of Africa. He thought it would be desirable to ascertain by teaching how near the chimpanzees could be brought to man, and if the experiment failed, then let the theory of Darwin cease to be believed on that point, and let it be accepted that intellect fails in the ape and begins with man.

Mr. MACBETH thought that something like injustice had been done to Mr. Darwin in the course of the discussion by attempting to fasten on him any theory respecting the unity of the human race. He had, indeed, removed certain objections to the unity of man that would otherwise arise from the great diversity in the different races of mankind. The question was, had they any facts to guide them in determining whether they were of one common origin or not; and such facts he conceived were afforded by philology. By philological investigations it had been ascertained that races in different parts of the globe, who were supposed to be distinct, spoke a language based on the same roots, and they must, therefore, it might be assumed, have sprung from a common origin. Anthropologists ought not to ignore such a fact, and from prosecuting the inquiry in that direction they might arrive at other similar facts, pointing to a common origin of the human race. There was another point in the paper from which he dissented. It was assumed that there was an innate tendency in mankind to development, and to become civilised. Now, so far as he knew of the history of the world, civilisation was limited to certain races. There were numerous instances in which races of men have sunk from a comparatively high state of development to a very low condition; but he did not know of any race who had civilised themselves. Civilisation always proceeded from without and not from within, in illustration of which he adduced the civilisation of the Britons by the Romans, and other instances. Mr. Macbeth inquired on what authority it was stated that Dr. Prichard had changed his opinion. He did not think the sentiment attributed to him was such as Dr. Prichard would have adopted. He denied that he was bound by Christianity to object to any theory as to the number of original races of mankind.

Mr. BLYTH said the formation of the lower limb of man was different from that of any other animal, and he could not admit that there was any gradation between him and the lower animals. The lower limbs of apes were more different among themselves than any similar differences between the races of man. There was nothing, indeed, more different than the feet of the orang and of the gorilla. He was inclined to believe in the single origin of man, for if man had been developed from different forms of apes, he would have retained several marks of the lower types of animals, which he does not. Darwin had brought forward instances where varieties of the human species had varied very much as well as of animals; but the changes in pigeons, on which Mr. Darwin laid much stress, were much greater than any in the human race; and when they considered the endless variations of condition of different races of men, it was, he thought, wonderful that they were not more dissimilar.

Mr. J. McGRIGOR ALLAN thought the paper supported the theory originated by Hippocrates, sustained by Buffon, and recently by Dr.

Moore, that colour of the skin was due to climate. It was a plausible theory, as the blackest men were found under the Equator, and there was almost a chromatic scale of complexion, until we got to the Arctic regions, where, unfortunately for the theory, the Esquimaux, living among eternal snows, were not fair, but dark. The paper raised the question: Does the Darwin theory involve a single origin of mankind? Progressive development does not exclude plurality of origin. Mr. Darwin first described the tremendous and perpetual struggle for existence going on amongst all organisms, and drew the obvious conclusion that the slightest superiority of the individual animal or plant would ultimately result in the preservation and natural selection of the strongest races alone. To this extent Mr. Allan presumed we must be all followers of Mr. Darwin. Can this process produce new species? Mr. Darwin showed what artificial selection would do in breeding pigeons, cattle, etc. If breeders can do so much in a few years, what cannot nature perform in millions of years? She is unbending, merciless, ruthlessly destroying the weakest organisms, selecting only the very best. She allows only the strongest males to pair with the females. So, Mr. Darwin thinks all existing forms have descended from four or five original types, or from one primordial form into which life was first breathed. Does this celebrated hypothesis involve unity or plurality of human origin? Mr. Allan differed from Professor Huxley, the exponent of unity. Mr. Allan had attempted to show in a published paper on the Ape-Origin of Man, that if development from the ape could take place in one instance it might take place in several instances. The arguments for a multiple origin of mankind appeared to him insuperable. For example, glancing at the racial realms into which Professor Agassiz had divided the world, the polygenist rested on the following positions:—i. The obvious physical, mental, and moral distinction of races not explicable by the unity hypothesis. ii. The human races resembling plants and animals in dwindling and becoming extinct if transplanted from their native localities. iii. The inveterate antipathy between the races continually at war with one another. iv. The historical fact deduced from the most ancient monuments that no change is ever effected except by interbreeding. v. The impossibility of producing a permanent self-sustaining hybrid race. For these reasons he was a polygenist and a Darwinian, believing Darwinism left man's origin an open question. Mr. Allan could not agree with Mr. Wallace that mankind had ever formed, or ever would form, a homogeneous race. He doubted the possibility of the white races ever succeeding in supplanting the dark races, and permanently colonising the globe. All the facts of anthropology and the effects of climate were against the permanent ubiquity of the white races.

Professor MACDONALD objected entirely to the theory of the progressive development of man from the lower animals. He said that if they examined the records of mankind from the earliest periods, it would be found that they were unchanged in the places they inhabited. Races of men were created fitted to inhabit all the regions of the earth. There were races, for example, that could only live within

the tropics, and others that were not fitted to live beyond the temperate zones; and the moment they went beyond their natural spheres they became unfit to live as healthy beings. That was the theory of Dr. Knox; that people were only fitted to live in the regions in which they were created, and observation proved it to be true. He (Prof. Macdonald) concluded that though man is an animal he does not belong to the same class as the lower animals; that there is as much difference between him and them as there is between vertebrated and invertebrated animals; and that man was no more traceable to an ape, than a lobster is to a fish or a bird. The question then was, is civilised man derivable from the lower grades of the human race or species? There were lower known types of humanity, such as the dwarfs of Central Africa, and the still lower savages of Malacca, who live in trees; but there was a marked difference between them and apes. The former were dexterous in the use of weapons, and they propelled poisoned arrows through long tubes with great skill; they had, therefore, a character which the best trained monkey did not possess. A monkey would never add a billet of wood to the fire when it was cold of its own accord.

Dr. BEIGEL, alluding to the remarks of Mr. Macbeth on the advantage to be derived from philology in inquiries respecting the origin of man, said that it was impossible to look to philology for facts bearing on the question, for they had to deal with different periods. Anthropology went back for millions of years, but our philological knowledge extended to a comparatively recent period. Dr. Collier would carry them back to a time when the earth was not sufficiently developed for the existence of animal life, and when they looked to the facts discovered by natural philosophy, they found that the very first commencement of life on earth was from a very small cell. The human body was composed of millions of those cells, and everything living consists of nothing but small cells. The questions then were, when did the development of the first organised being take place? and then, when did the first thinking being become developed? that was the vital question on which they must base their assertions, and until that was settled they had no ground whereon to speculate about the origin of species or other things of the kind.

After a few words from Mr. A. L. Lewis the meeting adjourned to the 3rd of March.

[The following letter has been addressed to the Editor of the J. A. S. by Professor Macdonald.—Ed.]

SIR,—The abrupt termination of the long protracted debate at last meeting of the Society *On Darwinism and Anthropology*, closed by the speech of Dr. Beigel, in which he insisted that the course of development arose from "a cell," overlooking that an organised cell, whether animal or vegetable, can only originate in an organism, and be developed within an organism or organic body, either in the mature parent as in man and mammals, or in a transient condition, as in the eggs of the ovipara, which are at least ninety per cent. of the whole animal kingdom.

There is an idea conveyed in Dr. Beigel's speech of the possibility of a primitive organic cell existing as an independent entity external to an organism, and becoming developed into an animal. I have considered it necessary to protest against the statement and at the same time to point out how a due consideration of the progressive development of an embryo or germ within the Graafian vesicle would militate against Darwinism in any attempt to press hybridism beyond the boundary of nearly allied species, and also against breeding among hybrids themselves being carried beyond the third or fourth generations, unless refreshed by one or other of the originating species.

In the human family the organic ovule can only be impregnated within the ovary of the female, from which it is kicked out from the Graafian vesicle by a *vis à tergo* into the expanded fimbriated extremity of the Fallopian tube in its course to the uterus, the arena of its complete development. The human ovule, when it commences its first journey of life within its mother, may be described as a minute automatic organism existing by means of its own circulating system during one-fourth of its own embryonic existence, enclosed within its bed, entirely unconnected with its parent; and even when stranded on the *decidual surface* of the uterus, there is no vascular connection between the blood-vessels of the fœtus and the mother.

The independence of the embryo, even in the earliest stages, is well shown in those strange cases where it has eluded the grasp of the fimbriæ and escaped into the abdomen and been there developed, attached to some part of the surface, similar to the parasitic worms which sometimes infest the human body. As to the idea that man has been developed from the monkey, and these again from lower types, the above explanation will show its impossibility.

Yours truly,

WILLIAM MACDONALD.

MARCH 3RD, 1868.

DR. JAMES HUNT, THE PRESIDENT, IN THE CHAIR.

THE minutes of the preceding meeting were read and confirmed.

The Fellows elected were announced as under:—W. Mason, Esq., 4, Victoria Street, Westminster Abbey; Sydney French, Esq., 37, Gloucester Street, Queen's Square; Alexander Duncan, Esq., Fortbarrington House, Athy, Ireland; Arthur Dashwood, Esq., Lampeter College; Frederick Hovenden, Esq., 93, City Road; Walter Moxon, Esq., M.D., 6, Finsbury Circus.

Corresponding Members.—Professor Paolo Gaddi, Modena, Italy; Dr. Isidore Kopernicky, Bucharest, Turkey; Professor Antonio Garbiglietti, Turin, Italy.

The following presents were announced to have been received, and thanks were given to the donors :—

FOR THE LIBRARY.

- From the ACADEMY.—Trans., Royal Academy of Science, Denmark.
From the EDITOR.—Medical Press and Circular.
From the AUTHOR.—Rev. F. Fothergill Cooke, Authorship of the practical Electric Telegraph.
From the SOCIETY.—Proceedings of the Royal Society, xvi, 98.
ANON.—Social-Juristische Studien, 5th Part.
From the SOCIETY.—Journal of the Royal Asiatic Society of Bengal, Part i, No. 2, 1867.
From the SOCIETY.—Royal Society of Sciences of Saxony, Der Methode d. Klemsten Quadrate. Berichte d. Math. Phys. Classe 1866-67.
From the EDITOR.—Proceedings American Anthropol. Soc., 1867.

FOR THE MUSEUM.

From Dr. CANTON.—Skull of a Negro.

Mr. DENDY exhibited an egg-cup which he had extracted from the ileum of a man after death, as illustrative of the great endurance of human organisation.

The Rev. J. D. WOOD exhibited two specimens of Indian manufacture which he considered very remarkable. One of them was an ornament made from the gum jade of China, so extremely hard that it only be cut by its own dust, and in the centre of it there was a disc which had been cut out of the stone, so that it could rotate in its own groove; it was taken out of the private apartment of the Queen of Oude, but what it was meant for he could not say; it might be an amulet. The other article was a dress, with legs and arms, made in one piece, but so small that it was difficult to conceive how any person could have gone into it.

Mr. HARRIS and Capt. BABINGTON stated that it was a kind of dress not uncommon on the west coast of Africa, and that such dresses were worn by men as well as by girls and boys.

A jaw-bone, found in a Roman sewer in the city of London, was contributed by Mr. LYLE.

A communication from Mr. HENRY SMYTHIES, of New Zealand, was read.

A paper on the Hovas of Madagascar, by Lieut. OLIVER, was then read.

The island is situated at a distance of four hundred miles from the coast of Africa, and would appear never to have been connected with that continent. It is peopled by races as peculiar in their way as any races can be, and offering very marked pre-eminence over the Negro. They may be termed Oceanic rather than African. The general name of Malagasy has been given to the tribes, but to themselves they are known only by their tribal names. There are no traces in Madagascar of a primæval civilisation; but the Malagasy have considerably taught

themselves. They have domesticated oxen and pigs, and made some progress in the cultivation of rice, yams, etc. Their religion is but recent, having been invented by the upper classes to control the lower. They are, however, receptive of superstition. Their language possesses a well-constructed grammar, but without written forms. There would seem to be two special types of man in the island; one marked by small stature and a comparatively fair complexion (comprising the Hovas, the Betanimena, and two other tribes); the other remarkable for a larger structure and deep brown or even black skins. These latter form the aboriginal population. Although black, these are evidently not Negroes proper, and even the dress of the Malagasy shows that they have derived none of their ideas from the continent. The population of the island is roughly stated at 5,300,000.

The physiognomy of the Hovas is Mongol, with affinities to the Malays. They form, although the least numerous, the governing race, and take the command of the army and administer the state. Though small of stature they are well-proportioned and graceful in carriage, but they are not capable of great physical endurance. Their heads are well-shaped, with high foreheads, marked intellectual capacity, small, often aquiline nose. The hair of late years has been cut short; the women wear their hair elaborately dressed. Grey hair is carefully pulled out. The complexion is olive. They are not natives of the central province of Ankova, though they occupy it; their original seat is unknown. Next to them in intelligence rank the Betsimasaraka and Betamina; they are supposed to have arisen from the intermixture of the aboriginals of the east coast and the remnants of an Arab colony. The second division of the Malagasy population consists of the black races; they are taller, and very athletic. The Hovas for many years paid tribute to the Sakalavas, until Radama I. invaded their territory and married their chief's daughter. They still carry on a slave trade from the east coast of Africa, at the rate of four head of cattle for one slave. Although the Hova claim the sovereignty of Madagascar, and have made treaties with the English as to the slave trade, they are powerless to prevent the Sakalavas from carrying it on, as they have only one station in the country of the latter. Lieutenant Oliver proceeded to enlarge upon many of the other tribes, and then spoke of the existence of caste, of polygamy, and of the peculiar custom of forcing the crews of vessels to pass one night with females of the island before supplying the vessels with water, provisions, etc. He also enumerated their punishments and penalties, and spoke generally of their singular habits and customs.

On the motion of the PRESIDENT, the thanks of the meeting were unanimously given to Lieut. Oliver for the paper.

Lieut. EARDLEY WILMOT bore evidence to the truth of all the statements in the paper, in which everything was stated rather under the fact than exaggerated. The Hovas, he believed, were of Malay origin, and they were different from the people of the surrounding tribes. They bore no resemblance in features to African Negroes.

Dr. KING stated some particulars relative to the ambassadors sent

to this country from Madagascar, whom he had the opportunity of observing, and of ascertaining from them individually what was the character of the people. He believed those ambassadors to have been decidedly of mongrel kinds, and that out of the six there was only one who had an approximation to the African type. He could not trace their language to any source, nor tell where they came from. The average appearance of menstruation is at fifteen years of age, and they never produced offspring under that age.

Dr. EVELEIGH said the paper conveyed much new matter of an important character. Mr. Jones had made different statements to him, which confirmed the descriptions given by Lieutenant Oliver. With regard to the period of menstruation, alluded to by Dr. King, he said he had been practising out of England for twenty-two years, and he had known girls menstruate at eight, nine, and ten years of age, and he had alluded to the confinement of a girl of thirteen. With regard to the probability of Madagascar having been at one time connected with Africa, he observed that copal gum grows all along the south west coast of the island, and as the same product occurs on the opposite coast of Africa, that fact seems to indicate a connection with the continent in former times. Lichen and other vegetable products on the opposite coasts seemed also to correspond. The language of the Gallas and others of the African tribes seemed to be similar to that of the Hovas, as was remarkable in a peculiar *click* in the pronunciation of certain words. As regards the natural productions of the country, he believed the natives cultivated many things extensively. The rice they produced was very good, and boiled peculiarly soft and white, being in that respect quite unlike Patna rice. Copal gum might be collected in Madagascar to almost any extent. With respect to the eighteen thousand Christians said to be among the Hovas, he observed that Mr. Jones estimated them, when he left the island, at one thousand, but said that Radahunia was anxious to introduce Christianity, because, from the excellence of its moral doctrines, it was calculated to do good. As to the Madagascans themselves, whenever he had examined them as a race, he had great difficulty in finding out their origin. The Bachati tribe were particularly mentioned, who seemed, from the accounts of them, to be analogous to the Bushmen of South Africa. Their stature was generally very short, not exceeding, in some instances, four feet. Their knowledge of the arts extended to the working in gold and silver, and they make straw baskets fitting inside one another to the number of twelve, similar to those made by the Hindoos; and their manufactures seemed more likely to have been introduced from India than from any other country. The slave trade, which was practised to a great extent, was probably introduced from Africa.

Dr. SEEMANN thought there was some contradiction in that part of the paper which referred to the remnants of ancient civilisation among the Hovas, and on the comparison of them with the former occupants of Nicaragua, for the latter exhibited a high degree of civilisation. With regard to the origin of the Hovas, it appeared to him that they were a Malay tribe, though in that opinion he knew he was opposed

to Mr. Crawford. There was an identity in the name of the coconut, a palm endemic to America. With respect to the supposed nation of dwarfs, he thought they might be similar to the Andaman islanders, who were of the Papuan race. There were many resemblances between the Hovas and the Polynesians, among which he instanced the practice of taboo.

Mr. DENDY said he considered Lieutenant Oliver's paper one of the most illustrative of any he had heard in that Society. He would, however, confine his remarks on it chiefly to that portion which referred to nomenclature. The difference and confusion of terms frequently used in speaking of different races tended much to retard the progress of science. The term Negro, for instance, was applied to several different races. Originally it was applied to every dark man who came from Africa. He presented two sketches of crania from the Mozambique, marked in a museum catalogue in London as Negroes, which he said were most unlike the skull of a genuine African Negro, a specimen of which he exhibited, which he believed was the finest African skull in England. There was no similarity between it and the skulls of Hovas, which had been produced, or his sketches, which Lieutenant Oliver, in reply, pronounced to be Hovas. He thought it was very desirable that they should not apply the term African Negro to capriciously coloured races, but that the term should be confined to the Negro of South Africa.

Dr. WOOD asked Lieutenant Oliver what he meant when speaking of the civilisation of the Madagascans. Some of the Indian tribes of America were said to be civilised, but they produced nothing. Had these people of Madagascar any manufactures? The term civilisation was generally very vaguely applied, and it ought in such instances to be more defined.

Mr. BLYTH thought more importance should be attached to the consideration of the kinds of animals and plants in Madagascar as indications of the origin of the Hovas. The domestic kinds seemed to be similar to those of India and of many parts of Western Africa. As the Arabs had had intercourse with them for many years, he considered it strange that Arab influence and the Mahomedan creed were not greater and more extended.

Mr. LYLE remarked, respecting the fact of early menstruation, that he had known cases of menstruation in England at eleven and thirteen years of age.

Professor MACDONALD thought the Hova skull produced more like the skulls of mountaineers in all parts of the world than the skull of an African negro. He believed in the separate centres of creation of the different races adapted to different parts of the world, and that the coast and midland mountains had peculiar creations adapted to them. He thought the general movement of the human races had been from the east towards the west; that the different races were originally created in special centres; that the Hovas originally belonged to the mountain races of Madagascar, having no connection with the Malays or Negro races.

Mr. WALKER expressed the opinion that the Hovas were of African

origin, and that the Madagascans generally came originally from Polynesia.

Mr. MACKENZIE inquired whether Lieutenant Oliver had found among the Madagascans any of the blue-eyed females, of whom he had read, and, if so, whether he had ascertained anything respecting their origin? He also wished to know whether any of the peculiar double bellows found in Sumatra and among some other savage tribes had been seen in Madagascar. In his opinion the Hovas were not of African origin, but Malay.

The PRESIDENT said that the Hova skull produced was considered by some persons to resemble that of the east African negro, but he thought there was nothing about it to warrant that assumption. The hair was a characteristic of African races. If the Hovas were of African origin, he should expect to find that they had the crisp curly kind of hair of the African negro, but it appeared from Lieutenant Oliver's description, that the hair of the Hovas was generally of a different kind, and that only a few of them had curly hair. He thought it was very desirable that they should have specimens of their hair, in order to assist in forming an opinion of their origin. The paper was one of the most important and interesting that could be brought before any scientific body.

Lieutenant OLIVER remarked, before addressing himself to answer the numerous questions put to him, that his paper had originated from questions put to him by the President of the Ethnological Society at the late meeting of the British Association at Dundee, as to "the comparison between the red men of America and the black men of Africa as seen in Madagascar" of which he had been reminded in the last number of the *Anthropological Review*. Now he wished to shew in this paper that the Malagasy were widely distinct from the Negro or black man of Africa.

In reply to Dr. King, he did not consider that the ambassadors from Madagascar, either in 1835 or 1864, were select specimens of the true Hova type, and were possibly mongrel, but as a rule the Hovas presented the characteristics of a pure race, distinct from the darker tribes surrounding them; the question of the generation of infants by parents at such an early age, as mentioned in the paper, had, he thought, been sufficiently answered already that evening. He was much struck with the pregnant suggestion of Dr. Seemann that the dwarf race of the Vazimba might be of Papuan origin, this can only be corroborated by opening some of the tumuli and examining their remains, which hitherto, owing to the jealous superstition of the natives, has been impossible; in exterior appearance and apparent construction only, they resembled the Nicaraguan barrows, with central upright stone or pillar. With regard to the manner in which the "taboo" was carried out, a pole with a small bundle of dried grass attached to the top of it, was placed at the entrance of any enclosure or building, which the idol-keepers might wish to preserve as sacred, this was called a "*kiady*," and was quite sufficient to prohibit the entrance of the vulgar herd. It is curious that the Malagasy, if of Malay origin, should be such bad sailors, they having no sea-going

native craft, and their pirogues in use on their lakes and rivers are of the most primitive construction; in this respect they are far inferior to any known islanders throughout the world.

The skull, of which the drawing is exhibited as coming from Mujaumb's bay, is evidently the skull of a Hova, many of whom were slain in the numerous affrays between them and the adjacent Sakalaras in the vicinity of their fort on the coast of Majumba Bay.

As to the state of civilisation to which they had advanced, he would remind Dr. Wood that there was always a difficulty in defining the exact state of civilisation to which any particular race had attained, indeed it is not so long since that the Russians were looked upon by us as thorough barbarians. A writer in the *Saturday Review* at the beginning of last year, took the author to task for terming the Malagasy "half-civilised,"* because the young ladies at the capital dressed in white muslin, and danced the lancers, (he might here mention that they danced not only the lancers but Sir Roger de Coverley, called by them "coverlids," entering fully into the spirit of it.) But they had advanced themselves to such a state of society that they possessed comfortable, well-built houses, farms, and a system of agriculture, they domesticated cattle, held markets, had formed a code of laws, established an army, and had their law-officers assisted by a police, they levied taxes and customs, and had been lately fully recognised by at least the English, French, and American governments.

With regard to their natural productions, from time immemorial they had cultivated rice and the sugar-cane, which are indigenous; indeed, it is stated on good authority, that rice and the sugar-cane were first imported into Virginia from Madagascar; the native cattle, under domestication, possess humps, but, curiously enough, the wild ones did not, a fact worthy of the notice of Mr. Darwin. Their sheep were fat-tailed and woolly, and made remarkably good mutton.

At to the copal gum, Dr. Meller, who accompanied the expedition as naturalist, pointed out abundance of these trees along the coast, and for several miles inland, up to a level of one thousand feet. They grew to a large size, the trunk of one measured was twenty-eight feet in circumference, with an enormous spread in proportion, and was covered with fruit: there was but little collected by the natives, and that Lieutenant Oliver believed was *dug up*†

It was very possible that the Mandingo and other West African tribes might have similar Malay affinities to the Malagasy, and that the Bushmen might have some obscure connexion with the dwarfed Vazimba, and have a common Papuan origin. Mr. Wake had certainly pointed out some remarkable similarities. Professor Macdonald, on the other hand, would have them to believe that the Hovas, being evidently mountaineers, had a separate and special

* *The Edinburgh Review* of last October, in reviewing Ellis's works, styles the Malagasy as *half civilised*!—S. P. O.

† On referring to Dr. Meller's report to the late Sir W. Hooker, it appears that he says, "Very little gum is collected; the natives incise the bark, and fix bamboos to receive the gum."—S. P. O.

creation and origin in the highlands of Ankova, in which he thought few could agree. In answer to Mr. Mackenzie, as to whether he had observed any blue-eyed individuals in Madagascar, although Rochon states some instances, he could give a decided negative in reply; the double bellows mentioned were in use throughout the mining district south-east of Antananarivo. Finally, as to the question of their hair, before leaving the country of the Hovas several young ladies had presented him, and Mr. Eardley Wilmot also, he believed (assent from Mr. Wilmot), with some little *souvenirs* of regard, in the shape of neatly plaited locks of hair, and he hoped, at a future meeting, to exhibit these to the Society.

Several diagrams were then exhibited and explained by Lieutenant Oliver, and the meeting adjourned.

MARCH 17TH, 1868.

DR. JAMES HUNT, F.S.A., ETC., PRESIDENT, IN THE CHAIR.

THE minutes of the last meeting were read and confirmed.

Thomas R. Pinches, Esq., of 27, Oxenden Street, Haymarket, was elected a Fellow. Professor Rudolph Virchow, of Berlin, was elected an Honorary Fellow. M. Louis Leguay, of Paris, was elected a Corresponding Member.

The following presents, received since the last meeting, were announced, viz. :—

FOR THE LIBRARY.

From the SOCIETY—Proceedings of the American Antiquarian Society.

From KENNETH R. H. MACKENZIE, Esq., F.S.A., F.A.S.L.—Medical Gymnastics. By Moritz Schreber, Esq., M.D.

From the EDITOR—The Farmers' Journal.

From the EDITOR—Medical Circular, March 4th.

From the AUTHOR—Ancient Faiths Embodied in Ancient Names. By Thomas Inman, Esq., M.D.

From the AUTHOR—The Antiquity of Man in the South-west of England. By W. Pengelly, Esq.

From the AUTHOR—The Geology of Devonshire. By W. Pengelly, Esq.

From KENNETH R. H. MACKENZIE, Esq.—The Art of Instructing Deaf and Dumb. By John Pouncefort Arrowsmith, Esq.

From THE ESSEX INSTITUTE, Salem, Massachusetts, U.S.—The American Naturalist, vol. i.

From THE INSTITUTE—Proceedings of Essex Institute, vol. v, No. 1.

From the EDITOR—Archiv für Anthropologie, vol. iii, part 3.

From the AUTHOR—Vaccination, and its tested effects; or Health, Morality, and Population. By Dr. Charles Pearce.

From the INSTITUTE—Journal of the Royal United Service Institute, Dec. 1867.

From the EDITOR—Medical Press and Circular, March 11.

From KENNETH R. H. MACKENZIE, Esq.—Why should an Atheist fear to die? By George Jacob Holyoake.

From Dr. JAMES HUNT, F.S.A., F.A.S.L.—Observations Microscopiques sur la Chevelure. By M. Pruner-Bey.

From the SOCIETY—Proceedings of the Royal Society.

Thanks were voted to the donors.

The death of Prof. van der Hoeven, Honorary Fellow of the Society, was announced.

The Rev. J. G. Wood exhibited several articles of Fijian and African costume, ornaments, and photographs.

Mr. Brebner exhibited a photograph of a fat woman, now exhibiting in London, and stated that the muscle of her arm measured twenty-six inches, and that of the thigh, three feet six inches in circumference, and the girth of the body, seven feet. She was only eighteen years of age, rather good-looking, and was stated to weigh forty stone.

Dr. BEIGEL said that the specimen of albinism, of which a photograph was exhibited by Mr. Wood, was, in his opinion of great interest from a medical point of view. We had been accustomed to consider that albinism occurred only in the Negro; but that was not the case. Albinism was a disappearance of the colouring matter of the skin, of which there were many instances among Europeans, but, of course they were not so marked as in the Negro. The specimen exhibited showed the defect in the colouring matter very clearly. Abrasion or lesion of the skin of a Negro, even a cut finger, would produce albinism, because the colouring matter would be lost.

The PRESIDENT called upon the members to express their obligation to Mr. Wood, and hearty recognition of his services, which was cordially responded to, and at the same time offered him the assistance of the Society in his researches.

The DIRECTOR announced that the Council had resolved that a diploma should be prepared for presentation to all the Fellows of the Society. The diploma would supersede the ordinary letter which had been sent to each member on his election announcing his admission to the Society. It would, in all respects, be more worthy and suitable for exhibition than the letter for admission which had been used hitherto.

The following paper was then read:—

Europeans, and their Descendants in North America. By JAMES McGRIGOR ALLAN, Esq., F.A.S.L.*

“Race is everything in human affairs.”—KNOX.

Who are the Americans? Science replies at once, the natives, or aborigines of America. The title belongs equally to the Esquimaux, who, dwelling in regions of eternal snow, are not fair (as they

* [The Editor of the *Journal* regrets that considerations of space have rendered it necessary to abridge this interesting paper, in particular, by omitting many apt citations and illustrations used by the author.]

ought to have been, according to the climatic theory of Hippocrates, endorsed by Buffon, Dr. Moore, and others) ; and the various tribes of red or copper-coloured men, who peopled that vast continent from north to south. On the discovery of America, the natives were computed at a hundred millions. *Now*, there are not more than from ten to eleven millions. Two hundred years ago, the United States territory contained five millions. *Now*, there are not more than 350,000. Strange as it may appear, the native, and rapidly diminishing races, are not called Americans, but Indians ; probably perpetuating the mistake of Columbus, who thought he had discovered a portion of India. The word American is now used to denote alien races which have settled on American soil. Here, again, we are somewhat puzzled to know—Who are the Americans ? So many colonising races may justly lay claim to that title. Europe is represented in the New World by Spaniards, Portuguese, French, English, Scotch, Irish, Germans, Danes, etc. Africa is represented by four millions and a half of Negroes ; Asia, by some fifty or sixty thousand Chinese. Thus, we have four distinct and antagonistic anthropological types on American soil. White, black, red, and yellow men, —very well characterised in Mr. Hepworth Dixon's *New America*, by illustrations of H. W. Longfellow, poet, Boston ; Eli Brown, waiter, Richmond ; Spotted-Dog, savage, Rocky Mountains ; and Loo-Sing, laundry boy, Nevada. "Under what circumstances," asks Mr. Dixon, "will they blend into a common stock ?" Dr. Knox would reply, "Under no circumstances whatever."

Regarding the white races alone, America presents to the anthropologist, a huge battle-field, displaying a practical illustration of the race-antagonism insisted on by Dr. Knox, and of Mr. Darwin's grand hypothesis of "Natural Selection, or the Preservation of Favoured Races in the Struggle for Life." Without dwelling on the contest between the various European and native races, the conflict between France and England, transferred from America to India, (and possibly about to be renewed in Africa) the fight between the mother-country and the colonies ; the wars with the United States ; the Negro and Indian questions ; contingent disagreements between the United States and the dominion of Canada ; the idea that the European races which muster so strongly in North America, will ever so far forget their nature as to live in permanent peace with one another, or amalgamate into one homogeneous race, appears to me the dream of an amiable philanthropic enthusiast, who either will not, or cannot master his anthropological alphabet. The day may come when the nations shall lay aside the sword and learn the art of war no more. Probably, it will be the same day on which the wolf and the lamb shall dwell together, the leopard shall change his spots, and the Æthiop the colour of his skin ! Judging from experience, that happy day will not arrive while there are any Irish in America.

When we speak of Americans in popular phraseology, we do not refer to the Empire of Brazil, whose territory is nearly as large as Europe, or to Peru, Bolivia, Chili, and other South American republics ; or to Mexico, or even to the dwellers in British American territory,

equalling, if not exceeding, the United States in magnitude. We are understood to mean that great Anglo-Saxon colony, which separated from the mother-country not a hundred years ago, and now, under the title of the United States of North America, claims to be the chief power, fitting representative, and ultimate controller of the destinies of the whole continent. The United States men say: "We are the genuine native-born Americans." So far as their rapid progress and political importance are concerned, they may—as constituting by far the greatest power on the continent—prefer with some justice a claim—not to monopolise—but especially to deserve the title of Americans. When we, as anthropologists, putting aside and rising above petty political, insular, and social prejudices, regard this great transatlantic people, our impressions must be of a mingled character. We behold men of our own race literally anticipating the utterance of the illustrious Gibbon, and "escaping across the ocean, carrying to a new world their institutions, religions, and laws." We see the descendants of our common forefathers, in the true spirit of the men who charged at Naseby and Marston Moor, defying a corrupt and despotic government, winning their own freedom, and placing the glorious principle of liberty on a broader basis throughout the world. We see this people, since the Declaration of Independence, advancing with such rapid strides, that, to ordinary observation, their present preeminence among nations, is a matter of marvel, not easily accounted for on the obvious principles of political economy. It is impossible for an intelligent, impartial Briton to travel through the United States and not feel a glow of honest pride, when he reflects that the majority of the thirty millions which compose this great nation are of his own race. John Bull must feel proud when he looks at the dimensions of his big strapping son Jonathan. The evidences of Anglo-Saxon energy are grandly illustrated in the United States of America.

On the other hand, it somewhat checks our pride to see the faults and failings of our race equally displayed, or even exaggerated to caricature on American soil. I am a good deal astonished when I hear Europeans and Americans alike, speaking of the latter as if they were a people *sui generis*—a race utterly distinct from any in Europe! As if the white American ever could be any other than a transplanted European! American character, if closely scrutinised, will appear nothing more than European character changed, modified, or developed by new conditions of existence. So long as the race remains pure, does not mingle with African, aboriginal, or Asiatic blood, the American colonist cannot differ materially either in character or *physique*, from the European race or races to which he belongs. It may be objected: "The American character is now very different from the English." I dispute the assertion. How, or in what respect do they differ? "Oh! Americans are proverbially self-sufficient, conceited, fond of boasting." Granted! Do we not discern here, the characteristics of our own race? For an Englishman to accuse a Yankee of boasting, is—to use a homely but expressive simile—like the pot calling the kettle black. Knox defines the Saxon as of all

others the most outrageously boasting, arrogant, self-sufficient beyond endurance, holding in utter contempt all other races, and all other men." The pride of the Englishman is proverbial. He classifies all the dark races as "niggers," and despises them as heathens and barbarians. It is said that a continental European even prefers the more obtrusive, humorous, loquacious, inquisitive manner of the Yankee, (who, by his rapid fire of cross-questions, frankly proclaims that he thinks the stranger "very small potatoes" compared with himself,) as the minor and more tolerable infliction, compared with the calm, stolid, supercilious air of self-conscious superiority assumed by the silent Englishman. The Yankee shows by his "tall talk" that he considers it worth his trouble to impress his own superiority upon the stranger. The Englishman appears to indicate that his superiority is too self-evident to need verbal assertion.

The Anglo-Saxon appears to be the only race which has practically solved the problem of constitutional freedom. Naturally, he is rather proud of this achievement. The utterances of self-glorification proceeding from John Bull and Brother Jonathan are not materially different.

It is difficult to decide which nation best or worst illustrates the combative spirit and love of conquest, so characteristic of the Anglo-Saxon race. We stand foremost among European nations in conquering and colonising,—in the attempt to extend our race and our dominion over the whole world, lacquering over our filibustering propensities by the flimsy pretence of philanthropic and religious motives. The Anglo-Saxon thinks he can permanently establish and naturalise his race, not merely in America, but in all temperate climates not within, or in close proximity to, the tropics. And a considerable number of old women of both sexes believe it. As an anthropologist, I doubt it. British settlers, whose mission is to teach the nations how to live, have not left one native alive in Tasmania; and will, no doubt, some day, make a clean sweep of all the native men, women, children, and kangaroos in Australia. In Van Dieman's Land, the civilising and Christianising process went on "with a vengeance." The white inhabitants will then call themselves true-born native Australians, and take the first opportunity of declaring themselves nationally independent. It will be the same in New Zealand, at the Cape, and in our other colonies; always provided that climate does not unkindly interfere with this curious Anglo-Saxon "little game" of Christianising and civilising savage lands. Not one in ten thousand doubts that such a system of colonisation will eventually succeed,—that it deserves to succeed! The Anglo-Saxon is everywhere the same. Strong, active, enterprising, industrious, courageous; full of unbounded self-confidence, he laughs at the most serious obstacles. Even the lessons of experience are disregarded. The Saxon grasps at universal conquest; and laughs to scorn the bare suggestion that his benevolent intentions respecting indigenous races can be ultimately frustrated by the inexorable laws of Nature.

In our scientific view of transplanted races, it is of no consequence that, after a certain number of years, the emigrants throw off alle-

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giance to the parent state, and become *politically* independent. From an anthropological point of view, they are, and must remain while they exist, *racial colonies* ! I shall endeavour to show that the United States' people, in spite of the episode in their political history, which resulted in national independence, have never been, and never can be, racially independent of Europe, so long as European blood prevails ; that they constitute still, *par excellence*, a colony in which the Anglo-Saxon element at present predominates ; that whether we consider *physique*, intellect, character, literature, laws, religion, institutions of every kind, these descendants of transplanted Europeans are, and, so long as they maintain purity of breed, must remain a *European colony*, physically, morally, and intellectually recruited and sustained from the country of their forefathers !

First, as to the physical characteristics which immediately attract our notice, Dr. Hunt, in his paper (*Anthrop. Rev.*, Oct. 1866), rightly characterises, as "some wonderful information," the following statements of Mr. Andrew Murray :—"We have seen a race of man formed under our own eyes, the Anglo-, or rather, the Europeo-American nation, as distinct and well-marked a race as any other ; and yet the change has been effected over the whole region in which it occurs at the same time. The race has apparently not been produced by an American being born from an Englishman, and then by his propagating young Americans ; but hundreds of thousands have had the same impress affixed upon them over the length and breadth of the land at the same time." "There he is, a nation, *per se*, known to *Punch*,—known to passport officers,—known to ourselves,—easily identified, easily figured, and easily caricatured." Dr. Hunt remarks, that "it is useless to attempt to argue seriously with an author who uses the words 'race,' 'nation,' and 'type,' as convertible terms. Nor need I dwell on the opinions of a writer who seems to have taken his knowledge of anthropological types from *Punch*." After characterising the statement, that the Europeo-American people are "as well-marked a race as any other," as "really melancholy," put forth as science, Dr. Hunt adds : "The change observed in Europeans who have settled in America, is both a delicate and difficult subject." Our President does not deny the change in many cases, but believes it to be "not of that uniform character which the author asserts." Dr. Hunt is "of opinion that the types at present existing in America are as diverse as those now existing in those portions of Europe from which they originally departed."

Having lived the greater part of my life in America, I can, so far as my personal experience goes, endorse Dr. Hunt's observations. The United States people may be called a Europeo-Africo-Asiatico-American *nation* (a definition which also applies, in a comprehensive sense, to the British empire) ; but to speak of them as a Europeo-American *race* is preposterous ! In this vast continent, in the adjacent islands, even within the confines of the great Anglo-Saxon republic, are displayed, often more strongly marked than in the Old World, all phases of European type, nationality, character, and race. In America, indeed, paradoxical as it may at first view appear, the

anthropologist may study races frequently to more advantage than in their native homes, because the impress affixed by European governments, more or less antagonistic to racial instincts, is removed on Transatlantic soil. *There*, the Celtic man, whether French, Irish, Welsh, or Highlander; the Saxon—whether Dutch, English or Scotch,—the South German, and other European races, appear in their true characters, more or less modified, developed, or exaggerated, by what Americans call their “surroundings.”

The typical Anglo-Saxon who takes no account of climate,—who laughs to scorn the idea that such a trivial thing as Nature should interfere to rescue the dark races from his *protection*, and to hinder him from playing his favourite filibustering game of colonising foreign lands, and enslaving or exterminating the natives,—sees plenty of strong, robust men and women in America, and ridicules the statement of physical deterioration. Yet, in what sense are such specimens *American*, when one parent, or both parents, may have emigrated from the old country? Brother Jonathan crowed over the fight between Heenan and Sayers. Saxons in England and Saxons in America regarded as an international combat this celebrated prize-fight, which America claimed as a victory for Heenan, while England made it a drawn battle. Call it which you please. Heenan, who was a much bigger man than Sayers, is an *Irish American*. The battles between British and United States troops have simply been battles in which Celt and Saxon were arrayed against Celt and Saxon. That Americans, even as they are, recruited and sustained by European blood, are decidedly thinner, less robust, and less healthy, than Europeans, is a fact of daily observation, which it does not need a visit to America to verify. The well-known caricatures of John Bull as a portly, corpulent old gentleman, and Brother Jonathan as a lean, dyspeptic-looking, lanthorn-jawed subject, if not accurate anthropological portraits, are so far true, that they certainly attest the vital distinctions in *physique* actually existing between the British and American Saxons and Celts. The earlier loss of hair and teeth in America is also a significant fact. Dentists make fortunes rapidly in the United States. A dentist told me recently that the most important and skilful inventions in his art came from America. The lack of corporeal development, of plumpness and rotundity, both in men and women, is well known to Americans. They not only admit, but are rather proud of the fact, adducing it as an instance of a more intellectual, spiritual, and ethereal nature than our own, and forming their ideas of female beauty in accordance with the transatlantic type. They laugh at John Bull, and caricature his stoutness, which is, in their eyes, as offensive as the lean, half-starved appearance of Brother Jonathan is to us.

The deficiency of muscular fibre and cellular tissue is particularly remarkable in American *women*, and it is curious to note how differently this fact is treated by British and Americans. The full development of the female bosom (justly considered as an absolute essential to a beautiful figure), is far less frequent in America than in Europe. I suspect this to be the principal reason why, in the

United States, full evening dress is the exception, not the rule, with ladies. Americans, with characteristic gallantry, attribute this conformation of the female bust to the greater delicacy of the American type of beauty. The fact itself is indisputable. The late Judge Haliburton pointedly alludes to it in *Sam Slick*. The late eminent American author, Nathaniel Hawthorne, gave great offence in his last work, *Our Old Home*, by his naïve strictures on English beauty, and the stoutness of English men and women. [The author here gave a series of extracts, furnishing interesting evidence on these points.]

Mr. Hepworth Dixon, in his *New America*, says that, in pious Boston and Philadelphia, no less than in wicked New Orleans and New York, the rule as to number of children is rather that of Paris than of London. Various reasons are assigned for the increasing unwillingness of American ladies to become mothers. I am disposed to attribute the chief cause to the delicacy of health produced by climate, rendering women unwilling to undergo the risk attending pregnancy, parturition, and the fatigue of fulfilling the maternal functions. We must, however, remember that ladies in Europe shirk the maternal duties, as far as *lactation* is concerned. It is fortunate, for the preservation of the race, that the more natural life of the humbler classes in rural districts, compensates for the sterility of ladies, and the waste of infant life through the neglect of fashionable mothers in towns; that women are still produced sufficiently healthy to discharge the double maternal duties imposed upon them by their *social superiors*, and who are able to nurse respectively *two children* more easily than the delicate lady can nurse *one child*. Nature appears to have erred in providing some mothers with lacteal glands! It is remarkable that the persistent abdication of a mother's duties should be found quite compatible with the exemplification of '*woman's mission*.' An unsophisticated person might imagine it more consistent with the prevention of cruelty to animals, for a woman to abstain from becoming a mother, rather than to have a number of children, and bribe another woman to nurse them and neglect her own offspring. "Now what, if this be true," says Mr. Dixon, "can be the end of such a fashion among the upper classes, except the rapid displacement of the old American stock?"

Americans certainly do not lose fat for want of good living, for they live on a most generous scale. I have heard an Englishman express his astonishment at seeing a young American lady (whom, from the pallor of her complexion, he imagined an interesting invalid) demolishing a rumpsteak at breakfast. Of course, we must not judge of a people only by the dwellers in cities. But a fair comparison may be instituted between the occupants of British and American cities. Having left my native country in infancy, I saw England, to all intents and purposes, for the first time when I landed in Liverpool in 1852. The square-set, robust figures and florid complexions of the British, I had noticed on board the steamer. At Liverpool, I saw, in the frequency of such types, in the full development of the female figures, and rosy cheeks of the women, abundant proof that the English were more healthy than our American cousins. I was

especially struck with three things : the stout, healthy, square-built, rubicund men and women, so different from the American type in New York ; the number and wretchedness of the beggars ; and the large size of the dray-horses.* American women are extremely beautiful in youth, but they soon fade. The beauty of the second youth, so frequent in England, is comparatively rare in the United States. Health is an absolute essential to beauty, and perhaps no climate is more favourable to the preservation of a fine complexion than that of England. English women possess good constitutions, which maintain beauty to the autumn of life. They are the mothers of men who have carried the flag of Old England round the world.

The precocity of American children,—the early age at which marriage is contracted,—the greater rapidity with which the course of life is passed over, as compared with Europe,—are all interesting anthropological facts, testifying to the effect of climate on transplanted races. An American boy is more advanced than an English boy of the same age, because he is more mature. He enters on life earlier, and has done with it sooner, for the same reasons. An American at forty is often as *blasé*, as old, mentally and physically, as a European at sixty. The former lives faster in every sense, and crowds into a given period a greater and more multifarious experience of life than the European. An American once admitted to me, that nothing struck him more forcibly, on his return from England, than the forwardness of young Americans. The independence of little chits, who in Europe would have been in the nursery, astonished him. "In fact," said he, "in the United States there are no children." I think this youthful precocity is not confined to America. It is observed, more or less, in Australia, and other Anglo-Saxon colonies. In the United States, parental authority is laid aside much sooner than in Europe. In some instances, it would be more correct to say, parental authority is never assumed, and does not exist. Young people begin to act independently, to manage their love-affairs for themselves, arrange their marriages, and regulate their worldly careers, at an age which appears preposterously premature to European prejudices. Youth, in short, is more fleeting. Women are aware that their charms will soon be on the wane. Hence, in America, married ladies cease going into society much earlier than in Europe,—a fact admitted by the late N. P. Willis, and other American writers.

The jealousies between the two nations are curious and significant to the anthropologist, who looks below the surface of laws, religions, government, institutions, society, to the racial characters which determine all these. The Chinese do not perceive any great distinctions between us and our American cousins, whom they style "second-chop English." Unscientific British and Americans (taught to regard each other through the distorting lens of national prejudices, founded on geographical separation and political distinctions) make mountains

* I never saw any of these immense horses in America. Why has such a valuable animal not been transplanted? Is the reason to be sought in the fact that the English dray-horse can no more thrive in America, than an Englishman can preserve his rotundity in that climate?

out of molehills, and reciprocally misconceive respective characteristics. Each accuses the other of faults common to both sections of one and the same race. For example, neither entertains a doubt that his nation is the greatest in the world. The American is thin-skinned; particularly susceptible, tetchy, and intolerant of criticism on his country. If John Bull does not resemble him exactly on this point, it is not because he is less patriotic, but because, in his stolid Saxon self-complacency, the old gentleman cannot believe that his self-evident superiority can be seriously disputed. John can repose on his laurels. He has won so many prize-fights that he can afford, in his mature age, to take life easily. He may even decline to fight in every quarrel, which periodically convulses *Christendom*, without any imputations on his courage. If John Bull laughs, till his jolly old sides ache, when a Celtic doctor, *Monsieur* Ledru Rollin, assures him gravely that he is in a deep decline, and that his constitution is breaking up; the bare hint of any weakness in *his constitution* makes Master Jonathan furious. He is like a youth who thinks it manly to be sudden and quick in quarrel. In some African tribes, it is the sign of having arrived at the age of manhood (equivalent to assuming the virile robe in ancient Rome), for the young savage to go home and beat his mother. Young Jonathan has a pleasant, wild way of asserting his own independence, by occasionally shaking his fist in the face of his mother—Britannia.

Surprise is often expressed that the American mind does not differ more from the English or European mind. The political importance of the United States, the divisions between that country and Britain, the three thousand miles of ocean which separate the Old from the New World, lead the majority to cherish the impression that an American, or United States man, must differ materially, and in all respects, from an Englishman or a European! Yet the study of American character shows these distinctions to be superficial, and neither radical nor profound. Mr. W. Clark Russell, in *The Broadway*, September, 1867, observes: "The Americans have as yet, properly speaking, no literature of their own. American intellect, as yet, possesses no marked feature,—no idiosyncrasy. Irving, Prescott, Longfellow, Bancroft, Cooper,—the finest specimens of their literary men,—are eminently English." The writer proceeds to account for a fact, which he seems to think sufficiently strange to require some explanation. To the anthropologist who thinks "Race is everything in human affairs," it is not wonderful that American resembles English literature. It would be very wonderful if it did not, since Americans are no more than transplanted Europeans. An Englishman or Welshman, Scotchman or Irishman, may go to America, repudiate his allegiance to Britain, curse his native land, abuse her institutions, call himself an American; but unless he could change his blood, nature, race, he cannot change his Celtic or Saxon character. The various manifestations of American intellect in literature, art, science, religion, laws, culture, society, prove that the great transatlantic republic is physically, mentally, morally,—in short, *racially*,—a European colony! Hence, the sensitiveness to European

criticism, and the European pilgrimage which every respectable American tries to perform. The intellectual come to Europe to gratify sincere yearnings and aspirations. The "upper ten thousand" come for the same reason that ladies wear bundles of false hair over the occipital region of the skull, covering the *little brain*,—because it is the fashion. The intellectual aristocracy of America is, as a matter of course, especially modelled on the European type. The more cultivated the mind, the more European it becomes. The intelligent, educated American who studies the history of his race, must go back to a time beyond Bunker's Hill,—before the landing of the Pilgrim Fathers,—before the great Anglo-Saxon race had divided its blood into two great currents. Bright as are the pages in the history of the United States, the chronicle is too brief to satisfy the mind of the student thirsting to drink at the great fountain of human history. It is not surprising that the cultivated American is overjoyed to acknowledge a common ancestry in the race or races which produced Alfred, Chaucer, Shakespere, Bacon, Milton, Locke, Newton, and so many other great men,—to admit that the Declaration of Independence, on Boston Common, was anticipated by *Magna Charta* at Runnymede;—that he comes to the land of his forefathers with feelings of devotional patriotism, more intense and rational than the spiritual allegiance of pilgrims to the shrines of Mecca and Rome! Washington Irving, in depicting English life, is more English than a native Englishman.

When Mr. Andrew Murray writes of the Americo-European nation, or race, he does not account for the great distinction in character, *physique*, speech, manner, etc., between the British American and the United States man. The peculiar shrill nasal voice, the Yankee drawl, is of itself sufficient to distinguish these two sections of the "Europeo-American race, nation, or type!" I shall be happy to hear from some medical gentleman an explanation of the cause of this peculiarity of voice. It may be considered as the Yankee accent, equivalent to the accent respectively indicating English, Irish, Scotch, etc.; but I am disposed to think that climate has something to do with it, by weakening the chest, and producing a *false* voice. The distinction between British American and United States citizens in this respect, may be due partly to the later settlement of the colonies not allowing time for results similar to those observed in the republic; and to the northern climate being more congenial to Europeans. It would, however, be a great mistake to suppose that the same parallels of latitude imply the same climate in the eastern and western hemispheres. Quebec, Montreal, St. John's (New Brunswick), and Halifax (Nova Scotia), are several degrees farther south than London. Yet in all four towns the cold in winter is much more severe, the heat in summer much more intense than in London. The differences between the British American and the United States man are, no doubt, partly due to both causes,—a later settlement of the colonial territory, and difference of climate; also, to the more intimate ties connecting the colonies with the mother-country, producing corresponding social results of culture and training.

Many persons ascribe the vocal peculiarity, spare figure, deficiency of bust, pale complexion, and dyspepsia, observed in Americans, solely to habits of living, eating, drinking, excessive smoking, and chewing tobacco. But to what cause are these habits reducible, if not mainly to the changed conditions affecting a transplanted race? Take, for example, the American drinks. Here the Yankee is truly original. The sherry-cobbler has become classical. We may "guess" at the nature of the compounds implied in the words "gin-sling," "whiskey-skin," "brandy-smash," "gin or rum cock-tail," "mint-julep," but with all the aid derived from the machine invented by Mr. Babbage, we are at a loss to "calculate" the ingredients which enter into such mysterious compounds as "apple-jack," "white nose," "stonewall," "chain-lightning," "railroad," "rattle-snake," "back-straightener," "corpse-reviver," "moral suasion," "bottomless-pit," "sabbath-calm," etc. From this list, which might be greatly extended, it might appear that Yankees literally got up in the morning to follow after strong drink. But though the Americans are a *drinking*, they are not a *drunken* nation. These drinks are by no means so formidable as they may appear. At New York, and as we advance south, the climate becomes unfavourable to the strong spirits, brandied wines, and heavy malt liquor, which may be drunk with impunity in the north. During the hot summer weather, this remark applies generally to North America. Beer, it is said, must be drunk in a drizzle. Our humid climate is especially favourable to the consumption of beer. Hence, on the principle of natural selection, brewers may be considered as a production of the soil and climate of Britain, and to constitute a race, especially favoured in the struggle for existence. These American drinks, containing but little alcohol, being exceedingly palatable, cool, and refreshing, may be, and *are*, drunk frequently with impunity. Even in choosing what to eat, drink, and avoid, Europeans cling respectively to their native habits and customs. The beer-drinking Englishman and the *Läger-bier*-drinking German, whose tastes and stomachs rebel against republican potations, are accommodated respectively at English and German houses, where each may enjoy his peculiar and favourite vanity.

America is a wide word. Between New Orleans and Quebec, from Atlantic to Pacific, the anthropologist may note the most antagonistic varieties of racial type displayed in *physique*, character, mind, habits, etc. In British America alone, English, Scotch, Irish, French immigrants form respectively colonies within colonies. Lord Durham has drawn an able picture of the French Canadian, or *habitant*, especially interesting, as illustrating Knox's views as to the inveterate antipathies and non-fusion of races. Though living under one government, and professing to worship one Saviour, British and French have made no steps towards amalgamation in Canada. Far from intermarrying and blending into one race, they cannot be induced to associate together in any way. They are taught apart, they worship apart; they rarely meet at the inns in the cities.* "Social intercourse never existed be-

* From Lord Durham's Report to the Queen, extracted from Montgomery Martin's *British Colonies*.

tween the two races in any but the higher classes, and it is now almost destroyed. At an agricultural show, French farmers would not compete with the English; distinct prizes were given in almost every department to the two races; and the national ploughing matches were carried on in separate, and even distant, fields. Their mutual fears restrain personal disputes and riots, even among the lower orders; the French dread the superior physical force of the English in the cities; and the English in these places refrain from exhibiting their power, from the fear of the revenge that might be taken on their countrymen scattered over the rural parishes. The two parties combine for no public object; they cannot harmonise even in associations of charity. The only public occasion on which they ever meet is in the jury-box, and they meet there only to the utter obstruction of justice."

Knox thus describes the attempt of France to colonise Canada:—"The most highly civilised people on the earth, transferred to a vast country a portion of their people. This was no helter-skelter, pell-mell, go-ahead, Saxon rush,—no Californian rout; it was an emigration of a portion of a Celtic race, with all their household gods, their monkeries and mummeries, their nunneries and seigniories, feudality and primogeniture; with every other law and influence which feudalism and religion could devise to enslave the souls and bodies of men. It was to be Old France on a small scale; and so it became, very speedily, with this difference, that being withdrawn from the vast body of their race, they remained nearly agricultural, as France was when they emigrated, so that a traveller, on landing, might find himself suddenly translated back, in time, to the period of Louis Quatorze, or even of the Regency; little men with sky-blue coats, like dreamy, half-crazed fiddlers; little women, little horses and cattle, little carts, still smaller ideas. Had the colony been left to itself, cut off from Europe for a century or two, it is my belief that the forest, the buffalo, the *wilde* and the Red Indian would have pushed him into the St. Lawrence, from the banks of which he had never had the courage to wander far. The race degenerated; the *habitans* submitted to a handful of English troops; they could not strike one blow for their country. They had sunk so low that when the glorious name of 'Liberty' inscribed on her colours, enabled Old France, —in a period so brief as to appear incredible,—to strike down, for a time at least, the monstrous dynasties of Europe, the Canadian Celt remained quiescent, with the noblest republic for his next neighbour the world ever saw."

Though correct in the main, Knox does not do justice to the French Canadian. He showed that he could strike a blow for his country during the rebellion. *Buffaloes* are not very troublesome in the neighbourhood of the St. Lawrence! The author should have written *moose*, an animal closely resembling the European elk. The inferiority of Celt to Saxon in the art of colonisation, Knox ascribes to the want of self-confidence,—of innate courage to meet the forest or the desert. The self-confident Saxon cares little or nothing for the land of his birth. He emigrates, and becomes a real native

American, Tasmanian, Australian, Africaner, as the case may be. He plunges into the forest; boldly ventures on the prairie; fears *no labour*. All the earth he is prepared to cultivate and sell to the highest bidder, so that it suits his purpose. Celts cling together in town and hamlets; the Saxon will not build a house within sight of his neighbour's, if he can avoid doing so. The Celt being without individual self-reliance, divides and subdivides, in the Irish cotter style, the bit patch-land left him by his forefathers, till his condition is scarcely superior to the hog which shares it with him. To sell the land, to divide the proceeds among the family, to accept his share and plunge boldly into the great game of life, is a step the Celt dare not take. He is not deficient in courage; no braver race exists; but he has no industry, no self-esteem, no confidence in his individual exertions (Knox, pp. 323, 324, 330).

While travelling in the townships near Montreal, on the right bank of the St. Lawrence, I thought I could perceive a verification of these views in the difference of the farming of the two races. The country settled by the French is flat; the roads are perfectly straight, and, in consequence of the subdivision of property, the freeholds form long, narrow strips of land, fronting on the road, which is thus lined with poor whitewashed cottages, presenting the appearance of one interminable straggling village. So perfectly alike are these dwellings, and at such regular intervals do they occur, that the traveller might sleep for twelve miles and not know, on waking, that he had advanced a rod. The monotony is most oppressive; and it is a great relief to exchange the French country for the hilly, undulating land settled by Scotch and English, where we find large farms and substantial dwellings at considerable distances from each other. In one respect, however, the French *habitan* has not degenerated. He is lively, cheerful, contented, and preserves that exquisite politeness for which his race is so justly celebrated. We do not look for civilised manners in the backwoods; but in the depth of a Canadian forest, I have been welcomed in the *shanty* of a *habitan* with ease, apart from familiarity,—with respect utterly devoid of servility. I have seen the French Canadian peasant display a native grace, combined with a manly dignity of deportment, which I have sought for in vain among Britons far his social superiors, and which a European gentleman or nobleman might study to imitate with profit. In sincerity, the Saxon may be superior; in refinement of manner, he is far inferior to the Celt.

When such are the racial distinctions among the four millions inhabiting British America, it would be superfluous to insist on those existing among the population scattered over that vast tract of land, which, under the name of the United States, stretches from the twenty-fifth to the forty-ninth degree of north latitude, and from the sixty-seventh to the one hundred and twenty-fourth degree of west longitude; whose greatest breadth is estimated at 1,300 miles, and extreme length from Atlantic to Pacific is 2,780 miles.* To suppose

* Chambers's *Information for the People*, vol. i, p. 273.

that the thirty millions dispersed over this immense area form a homogeneous race, because they live under the star-spangled banner of the Republic, is a self-evident absurdity. One might as well assert that the Celtic Irish, Welsh, Scottish Highlanders, the natives of Hindostan, of the West Indies, of Australia, New Zealand, and the Cape, the French Canadians, and the English, all form one homogeneous race, because they constitute the British empire, on which the sun never sets! Mr. Murray tells us that the change in race "is effected over the whole region in which it occurs; that hundreds of thousands have had the same impress affixed upon them over the length and breadth of the land at the same time." *When* does this remarkable change take place? Immediately on entering an American port? or on landing? or on drinking the first sherry-cobbler? Or does it not begin until the enlightened immigrant has formally renounced the "rotten old country" of his fathers, and taken the oath of allegiance to the land overshadowed by the glorious bird of freedom, who at the same instant dips his beak into Niagara, his tail-feathers into the Gulf of Mexico, and his almighty pinions into the Atlantic and Pacific Oceans? *Then* the miraculous change is effected, and the jolly, jovial, rubicund, rotund, portly, and protuberant Englishman dwindles rapidly into the lean, pale Yankee! Why does not the change extend to the other three types of humanity on American soil,—the black, red, and yellow men? Why do none of these types change materially, except by interbreeding? As to the white races alone, I have shown that a century of the closest connexion and community of government has not amalgamated Saxon and Celt in Canada. There is far less probability of races amalgamating under republican institutions. Look at the facts. Emigrants naturally cling together in a new country. Germans intermarry among themselves. So do the Irish. They live together, vote together, and their numbers are exercising a rapidly increasing religious and political influence in the United States. The Saxon settles down quietly in the land of his adoption. The Irish Celt does not forget *his* country. True to his race and his pugnacious propensity, he attacks the Saxon in Canada, merely to keep his hand in, and plots and schemes to separate Ireland from Great Britain. Thinking, as I do, that the Celtic man requires a paternal form of government, I regard the proclamation of a Fenian republic as a mere passing political agitation,—a mistake resulting from the sympathy of the Irish in America with the institutions of the United States. The Irish are proving as troublesome to Saxons in America, as to Saxons in Britain.

Independently of naturalised foreigners, native Americans differ among themselves almost as much as they do collectively from the British colonist. The three great sections of north, south, and west are so distinct in appearance, habits, manners, social and political views, as almost to form three separate nationalities. The word *Yankee*, which we bestow on all United States citizens—just as they lump all British subjects together as *English*—is in America confined to the natives of the New England States. The word really means English, and is a corruption of the term *Yengee*—the nearest approach

which the Indian could or can make to the former word. The late war illustrated the rivalry between north and south, and so far as it was a war on account of the Negro, confirmed the opinions of De Tocqueville, and the prophecy of Knox, that, "The war of races will one day shake the Union to its foundations." But it is in my opinion a total misconception of the true cause of that war, that it was undertaken solely by the North to emancipate, or by the south to retain the Negro in slavery. It was a war to decide which great section, the north or south, was to rule the republic. In the south and in the far west, where the waters of the Missouri and the Mississippi form a natural boundary between Atlantic and Pacific territory (possibly marking the eastern and western limits of two future empires), the word Yankee is a contemptuous term whose significance is not appreciated by British Americans or Europeans. The southern planter, boasting a descent from the old English cavalier, looked down upon the cotton-spinner and the wealthy trader of the New England States. The sturdy western backwoodsman despises both, and regards the refined and conventional citizen of Boston, New York, and Philadelphia from the same point of view as a British farmer regards a dapper Cockney. *Ceteris paribus*, British Americans and northern men are, I think, stronger than those of the south. As we approach the equator climate begins to tell. The 30th degree of north latitude forms a tolerably correct southern boundary of the United States, although Florida extends as low as 25 degrees, considerably nearer the tropics than Algeria. The colonisation of this African colony by the French is an experiment whose issue is extremely problematical. In the Southern States the Negro thrives and increases his numbers—(at least he did before the war emancipated, and made him free in many instances to starve), but the white man cannot labour in the south until the *climate* has been *abolished*! The superiority generally evinced by the Confederates in pitched battles furnishes no proof of greater physical strength. The south has generally excelled in *military*, and the north in *civil* affairs. The Confederate armies were officered by men who had received an excellent military education at West Point. I doubt if the world can show a finer race of men from a physical point of view than the lumbermen of New Brunswick, from amongst whom was principally raised the 104th Regiment, which did good service in the war of 1812, and marched on snow shoes several hundred miles through the forest in the depth of a severe winter.

I agree with Mr. Hepworth Dixon that the white and red men have mutually influenced one another to a much greater extent than is commonly supposed. On the frontiers of civilisation in the far west, although they are generally employed in shooting one another, the two races seem to have adopted each other's vices. The Indian is drunken, treacherous, and false. The white man is ferocious, polygamous, and is asserted, in some well-authenticated instances, to have practised cannibalism. But the influence of the Aborigines is far more profound and extensive than this. "What man," writes Mr. Dixon, "can doubt that Indian ideas on witchcraft, on polygamy, on plurality of gods, on the migration of souls, on the presence of spirits,

on future rewards, have entered deeply into the popular mind, and are now affecting for good or ill the course of American religion and thought. The red man is the original source of all our spirit-rapping, all our table-turning, and in the act of invoking demons to his aid, he is still beyond the reach of such puny rivals as the Davenports and Homes."

The Negro and Indian questions, Miscegenation, Mormonism, the Woman question, or the movement for abolishing all distinctions between the rights of the sexes (which would be a very sensible movement if we could first abolish all distinctions of *sex*); these are all important anthropological subjects, deserving of separate independent treatment. In conclusion, I briefly recapitulate a few of the principal points of my paper. I hope I have not altogether failed to show, in reply to my question: Who are the Americans? that the white population of North America are transplanted Europeans and their descendants, and do not form one distinct homogeneous race; that, independently of the black, red, and yellow types, represented by Negro, Indians, and Chinese, the white type is represented by various European races, which show no tendency to amalgamate and lose their respective racial characteristics: that the United States people, although politically independent, is anthropologically a Europeo-Africo-Asiatico-American nation, and that the present predominance of European blood renders the Americans essentially in the racial sense, European colonists. I have drawn special attention to the effects of climate—the physical alterations on the European races so palpable as to form the basis of the theory of a new anthropological type; and gallantry forbids me supposing that I have exhausted the patience of anthropologists, by the accumulation of evidence as to the effect of climate, in modifying the form, complexion, and health of woman. I have adduced testimony in support of Knox's view, that the colony might have already ceased to exist, but for the continual influx of fresh European blood. I have brought prominently forward the important fact that the colony has never been isolated from European immigration.

Two important anthropological questions are suggested in the antipathy and antagonism of races, and the physical deterioration slowly but surely effected by climate. The antagonism of the various races on American soil will eventually bear its inevitable fruit. The white races are only allied in attacking, subduing, and destroying the dark. Even as it is, before that object is achieved, they are at war with one another, and are continually engaged in an amiable rivalry as to which can excel in fabricating the most ingenious infernal machines, the most admirably contrived engines of death and wholesale slaughter. It is of no use crying peace when there is no peace, or ignoring the melancholy fact that man is the most destructive of all animals. The combative propensity and racial antipathies leading to war, and the less apparent, but far more deadly struggle for existence, resulting in natural selection, or the preservation of favoured races, going on before our eyes on the American continent (and everywhere else), do not concern the man of science in their political aspects, so far as they affect the permanency of the Union; but, as illustrating the develop-

ment of racial character, and the contest of the human pygmy with the giant nature, they offer subjects of profound interest to the anthropologist. That of climate raises, if possible, a still more deeply-interesting question. Will European colonisation be permanent in America? Can a colony be called successful which is continually recruited from the mother country? The fact that Anglo-Saxons in Britain fight under a Union Jack, and Anglo-Saxons in America under the stars and stripes, is not a satisfactory answer to the question. Nations are as subservient to the laws of nature as colonies. Has this great experiment in transplanting man succeeded, or will it succeed? Will there ever be a native-born white race in America, so perfectly naturalised and acclimatised as to be thoroughly independent of supplies from Europe, and permanently self-supporting? Will Celt, Saxon, and German Europeans generally fail in the north as Spaniards and Portuguese failed in the south? Will the prediction of the great anthropologist be fulfilled: "A real permanent American or Australian race of pure Saxon blood is a dream which can never be realised." This solemn problem may be considered as forming a portion of a still more comprehensive question. Can the white or European races ever permanently colonise the globe? Can they establish themselves even in temperate zones far distant from their native soil? Or, are they destined to repeat the failure of the attempt to extend a race beyond its natural limits, which history records of all the great conquering nations: Assyrian, Persian, Greek, Roman, Arab, Turk, Celt? I am disposed to agree with Dr. Hunt, that there is no such thing as real permanent acclimatation. In a paper read before the British Association at Manchester in 1861, our President says: "*We have exhaustion and degeneracy, but no real acclimatation.*" The modern Saxon may be destined to learn practically that the teachings of our science are not to be despised, and that in these lines, which seem to suggest the scientific theory of distinct racial realms for *man*, as well as for other animals, and plants, and that the various races cannot overleap their respective natural limits with impunity,—Horace possibly anticipated some of the conclusions of modern anthropological science.

*"Nequicquam Deus absceidit
Prudens Oceano dissociabili
Terras: si tamen impie
Non tangenda rates transiliunt vada.
Audax omnia perpeti
Gens humana ruit per vetitum nefas.
Audax Iapeti genus
Ignem fraude malâ gentibus intulit."*

The President moved a vote of thanks to the author, which was carried unanimously.

The Rev. DUNBAR HEATH considered the paper both excellent in itself and well put together. He had no fault to find with it, except in the result arrived at by the author. His theory appeared to be that there were three or four races of men huddled together on the

American continent. The question was, what would be the result? The author's opinion was, that there would be no amalgamation of those races. To some extent, the facts seemed to bear out the author; but nevertheless, he could not conceive it possible that six or eight different races would always subsist under one government. Character—*geist*, as the Germans termed it—was formed alike in individuals and in nations: and just as there were several spirits, or inclinations, within ourselves; so are there in nations spirits and propensities contending, till at last one of them got the better of the rest. Such did he think would be the case in America. Archæology revealed that Europe was once covered by Tartar races,—before them, perhaps, by the mute men,—by Celts, Teutons, Moors, and others; but now, what were the results? The Franks had become the modern French nation; and, in like manner, the races which had produced the English and others, had become unified; he therefore looked for the same result in America. There would be a national character in America, though there was none at present. What, he inquired, would be the result there? It would have to do with politics; for it was the political force that would ultimately govern. The future of the American depended upon which of the races had the mastery,—perchance the Negroes would have; perhaps the Irish, or the Swedes, or the Teutons; but whichever it might be, there would be a result in America, just as there had been in Europe. It was remarkable that the northern Americans seemed to have utterly lost all that political instinct which was so strong a feature in Englishmen, and to be guided by passion, which was the most powerful political influence amongst them. The course of politics would show which of the six or eight racial forces would predominate. In his opinion, the paper had a definite object, which he hoped would be kept in view. The author's argument was that several racial differences exist, and would continue; but he held that, whether the national character became Yankee or Southern, there would be, in time, a distinct American national character.

Mr. ANDREW MURRAY said, that as the author of the work (*The Geographical Distribution of Mammals*) which had formed the basis of much of Mr. McGrigor Allan's amusing strictures, he might be allowed to say a few words on this subject. Mr. McGrigor Allan denied that there was any appreciable difference between the English and the Anglo-Americans. He was not, indeed, wholly consistent in his remarks on this point, for at the same time that he disputed this, he supplied multitudes of examples to the contrary, which he referred to habits and modes of life. But adopting the view in the main that there was no material difference, he twitted him (Mr. Murray) with having arrived at his opposite conclusions from a study of the pages of *Punch*—the inference being that the views of an author who drew his materials for scientific discussion from such a source must be measured by the standard of the fountain from which he drew his inspiration. If this were so, Mr. McGrigor Allan has taken a great deal of unnecessary trouble, for he had devoted a very large part of his excellent paper to controverting them.

The truth is, however, that his (Mr. Murray's) reference to *Punch* had been misapplied. He did not give the caricatures in *Punch* as his reason for believing that the Anglo-Americans were of a peculiar type. What he said was that they were peculiar, and that the fact was so notorious that the type was seized by *Punch*. Any one who was familiar with the faces of the New Englanders would admit that *Punch* had seized the types correctly, and it appeared to him that this was a kind of evidence especially valuable and impartial, as it was plain it could have been given with no object affecting this inquiry. Mr. McGrigor Allan had dwelt on the small extent of difference between the European and the Anglo-American, and seemed to demand more important changes before he could admit that they were changes at all. But all changes were matters of degree, and if the existence of permanent change was admitted at all, the principle for which he (Mr. Murray) contended was conceded. In estimating the extent to which change of race might be expected to arrive under new conditions of life, it appeared to him that the most important point of all to consider was the amount of change of conditions. We know from our own sensations how slight a change of condition will act upon our system. A migration from Brompton to Hampstead, or *vice versa*, will restore health or invigorate the system. Any change will affect us; but the greater the change the greater the effect. Now, it would scarcely be possible to find any two countries at such a distance from each other as America and Europe, more nearly alike in general character; consequently, great change was not to be expected. It was part of his creed that length of time had nothing to do with alteration, except as giving greater opportunity for repeated change of condition. Of course, some time must be allowed for the change to operate—just as we allow time for an alterative or tonic to get into the system—but just in the same way as after the alterative or tonic has done its work, a continuance of the same dose ceases to have any effect, so he regarded a continuance of residence in a new country would have no more effect after the alteration in the race had once been established. Here we are dealing with the life of a species, and not with that of an individual; and, of course, a correspondingly greater time is required for the alterative dose of change of condition to operate. But the principle is the same. In his opinion, too, Mr. McGrigor Allan underestimated the amount of change which had actually taken place in the Anglo-Saxons, and had entirely overlooked (at least he, Mr. Murray, had failed to catch any observations upon it) the change in their intellectual constitution. This was of a very marked character. Every one knew the remarkable talent for mechanical contrivance which had been displayed by the Americans. It was a special talent running in a special direction, and struck him as of great significance in this inquiry. Mr. McGrigor Allan had said that if the Anglo-Americans had undergone a change, so should all other immigrants; and had challenged the opponents of his views to produce other instances of change in other parts of America. In reply to that, he pointed to the American Negroes and French Canadians in North America. In truth, the fact of such changes having taken place was one of the very

arguments adduced by him in support of his general views of change. He maintained that such changes had taken place in every country on every part of the globe in which large masses of immigrants had settled—Mexico, Australia, Peru, were notable examples. More than this, bodily change was always accompanied with mental change. We had only to compare the intellect of some of the wealthy blacks of the Southern States with that of the savages of West Africa, from which they sprung. True they were blacks, and had the character of intellect of the blacks, but immensely advanced. Many of the blacks in these States were intelligent, clever mechanics; and more than all, many of them were actually industrious. Industry (including in the word forethought for the morrow) he regarded as one of the first steps in the progress of development of the human races. On some points less directly affecting his own theories, he differed from Mr. McGrigor Allan. He thought he did injustice to his countrymen in attributing to John Bull a haughty self-complacency, which looked down upon everything but what was British. The unsociability and reserve, which he so interpreted, appeared to him in a great degree rather evidence of shyness and self-depreciation. He was so doubtful of his own excellences, that he would not expose himself to the rebuffs which his modesty suggested he might receive. The more frank Gaul never conceives it possible that any one can doubt of his superexcellence, and acts accordingly. He would, in conclusion, suggest to those anthropologists who believed in the existence of races, tribes, and families as distinct, tangible, and definite things, that they might with advantage take a leaf out of the book of zoologists, who, after long believing in the existence of genera, families, etc., were now coming to regard them as mere conventional subdivisions devised by systematists for the convenience of arrangement. He did not dispute the existence of divisions; but as no two were alike in degree of difference, in number of differences, or in quality of difference, he held it to be impossible to define or separate them into groups of equal value, or to say where a tribe becomes a nation, a nation a race, or a race a species.

Mr. A. C. SWINBURNE said that not having been in America, he felt a certain reluctance in expressing his opinion on the question, but he must protest against the author's remark that there was no root-point of difference between the literary men of America and England. In his opinion there was a marked difference; and if there were any similarity between the writers mentioned and those of our own country, he thought it was to this extent—that Washington Irving's compositions were Addison and water, and those of H. W. Longfellow, Tennyson and water. But there was one American poet, who, at least in his opinion, exhibited a special peculiarity not taken from any European model; namely, Edgar Allan Poe, whose works he had always admired as poetical and having an intellectual expression of their own. There might be many better writers in Europe, but he knew of none; and, at any rate, there was undeniably a peculiarity in Poe. So much for the south, of which Poe was an example. And with regard to the north, there was Walt Whitman, whose composi-

tions were undoubtedly superior. There was something quite fresh and new in them, whether for praise or dispraise, and a decided originality. His writings had received a slow acceptance even in America; but they were slowly and surely making their way in Europe, and would in time be fairly recognised. America was not so sterile as the author had endeavoured to make out; but, on the contrary, she appeared to have, nay, she had, a new spring of intellectual power. She had amply indicated her power of throwing out original ideas both in literature and in mechanism, which could not in any way be referred to Europe, Asia, Africa, or to any other place. Then there was Emerson, in whom, though it must be admitted there was a certain infusion of European feeling, there was also a distinctive feature not European at all. Literature had been said by some to be the smallest test of intellectuality, and perhaps it was so; but, nevertheless, it was worth while to inquire whence the two men he had cited, who had made their mark in Europe, had derived their peculiarity. In truth it was purely American. Apart from literature, America had solved the great problem—which Europe had not yet succeeded in solving—the problem of democracy. It did not signify what were the particulars in each case, but it was certainly the fact that the question of democracy was agitating all Europe. Russia was being convulsed by it, Spain was heaving with the throes of it, in France it was ready to burst forth instantly—of England he would not speak—all were in the throes of convulsion upon this question, but in America it was solved. In Europe the nations exercised a certain influence over one another; the Anglo-Saxon race could not proceed alone. England could not move without moving Prussia, Prussia without moving Italy, and so on. In his opinion, American intellectuality was an original distinct native product, not derivative from any other country.

Dr. J. W. WOOD then spoke at length, but as he has kindly promised to put his remarks in the shape of a formal communication, their insertion is deferred.

Dr. BEIGEL moved, and Mr. BROOKES seconded, the adjournment of the discussion.

Dr. CHARNOCK asked to be allowed to remark, in reference to what the Rev. Dunbar Heath had said about the Tartars, that there was no reason to think they ever occupied more of Europe than they do at present. The Celts, on the contrary, had at one time occupied every inch of European territory.

The meeting then adjourned.

MARCH 31st, 1868.

DR. HUNT, PRESIDENT, IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The Fellows elected were read as under:—Richard Mullins, Esq., of Rugby; J. W. Wood, Esq., M.D., of Atlanta, Georgia; James Barr

Mitchell, Esq., M.D., of Paris ; J. Charlton Parr, Esq., of Warrington ; Dr. Thomas Godrich ; John Henry Biddles, Esq., Solicitor ; Charles Atkins, Esq.

Local Secretary.—The Rev. John George Wood, M.A., F.L.S., of Erith, Kent.

Honorary Fellow.—M. Tschurowsky, Moscow.

Corresponding Member.—Dr. Leemans, Leyden.

The following presents were announced to have been received, and thanks were voted to the donors :—

FOR THE LIBRARY.

From the AUTHOR—Nursery Tales of the Zulus. By the Rev. H. Callaway, M.D.*

From the EDITOR—The Med. Press and Circular.

From the ACADEMY—Memoirs of the Imperial Leop. Carol. German Academy of Naturalists, vol. xxxiii.

From the AUTHOR—Chapters on Man : 1868. By C. Staniland Wake, F.A.S.L.

From the AUTHOR—The History of Collingham : 1867. By E. G. Wake, M.D.

From the SOCIETY—Report of the Proceedings of the Geological and and Polytechnic Society of the West Riding of Yorkshire.

From the AUTHOR—Ludus Patronymicus. By Dr. R. S. Charnock, F.S.A., V.P.A.S.L., etc.

The Rev. DUNBAR I. HEATH exhibited a large collection of Japanese toys.

Mr. GROOM NAPIER exhibited a variety of articles from New Zealand, including specimens of gum and of jade.

The PRESIDENT then called on Mr. Brookes to resume the adjourned discussion on Mr. Allan's paper on "Europeans, and their Descendants in North America."

Mr. BROOKES said the object of the paper was to show that the descendants of the English who originally emigrated to America are still Englishmen, only with a certain falling off ; and that they were not a distinct race, nor likely to become so. From that view he (Mr. Brookes) decidedly differed. The facts quoted by the author in support of his opinion—the deficiency of hair, of adipose tissue, and the bad teeth, were not facts to justify his conclusions as to the degeneracy of the race. The Americans had given proof of originality in many things. Mr. Swinburne (than whom few could be more competent to judge) had borne testimony to the originality of two of their poets ; and they had shown originality in diplomacy, in mechanical inventions, and in government,—yes, he would repeat it, in government ; for they had shown that farmers, and planters, railsplitters, and tailors, were quite as competent to govern empires as "kings and princes to the manner born." The American republic was, in fact, as well governed as any empire in this part of the world. He did not admire their mode of government in many things,—it would not suit him, nor the people of this country perhaps ; but if it suited the American people, that was quite sufficient. The

paper went to prove that races cannot be transplanted. None of the facts adduced, however, proved that ; but the contrary. The change already effected in the Americans had been very great ; greater, indeed, than could have been supposed possible in the time. The extraordinary manifestation of self-conceit was said to be only an exaggeration of what was seen in John Bull ; but he contended that it was totally different. The English were not a boastful, swaggering people, and the reserve and pride which characterised them was totally different from the self-assertion and self-conceit of the Americans. They were quite distinct manifestations of character, and might be considered indications of the formation of a new race. He contended that races might change, and that what is called exhaustion and deterioration might be nothing of the kind. If it be true that races cannot be acclimatised and changed to accord with different conditions of climate, etc., whence came all the races now existing in Europe ? The Celtic race occupied all Europe at one time, and they came from the far east ; and if such a race could become acclimatised, and constitute the permanent inhabitants of all the various countries of Western and Northern Europe, the proposition put forth in the paper could not be maintained. The facts stated by the author were capable of other explanations. The English in America had only been there one or two hundred years, which was but a small period compared with the thousands of years during which the Celtic race had been in the process of formation, since they left the far east. Whence, he asked, came the British race, and what were their definite characteristics ? They had been forming during two thousand years, and were not yet properly formed. No race, he considered, could ever exist in future so perfect as the Celtic and Teutonic races, in consequence of the facility of communication and of intermixture which had been introduced in modern times ; and no period would be sufficient to allow of the formation of such distinct races again. We are still a mixture of all the races of Europe, and are likely to be for, perhaps, a thousand years more. The time might come when this country would be considered a kind of used up country, and England would be left behind. There would then, after a lapse of a thousand years or so, be a race in England possessing the combined characteristics of all the races that had come to this island. If, therefore, it required as many thousands of years to form other races, it was premature to pronounce any opinion against the possibility of a new race in America.

Mr. A. C. BREBNER said he had never been in America. He agreed generally with the remarks of Mr. Brookes. He did not refer to the political conditions of the Americans (who were progressing in the same road we ourselves had travelled in), but to their physical and intellectual qualities. He thought there were the germs of a new people in America, but time was required for its complete formation. The British people themselves were not produced and moulded, as they are at present, in a day, nor had they yet finished growing in strength, vigour, and power ; being themselves only acclimatised colonists from Asia. As to the alleged deterioration in the physical power and intellectual qualities of the Americans, no proofs of either had been ad-

duced, and, in fact, the very reverse was the case, as evidenced by the indomitable energy, courage, and disregard of hardships displayed by both sections of North Americans in the last war, especially in the forced marches of *Stonewall* Jackson and Sherman, and in the defence of Richmond, and in its siege and capture. Their original literature is in most cases bolder and more romantic. He believed the same peculiar genius of invention had been shown by no other people. Mr. Allan said the climate enervated the women and prevented their having children. That might be partly true, but it was much to be doubted whether there was not a settled determination with the married to have no children, or a very limited number. The women in America being able to devote their energies to so many more pursuits than was possible in England, they were not so desirous of marriage as in England. The quality—not the quantity—of the children produced was the index of national strength; in large families there being few attaining to adult age. It might be well, considering the number of children forced into the world in England by their parents before they were able properly to maintain them, only to swell the ranks of the criminal and poorer classes, if many of our British men and women followed the self-denial of their American cousins. The non-bearing of many children might also arise from obvious motives of political domestic economy. Such a fact did not show any deterioration of a people, as the same was the case in France. Mr. Brebner protested against classing the whole of the American nation as Anglo-Saxons, which is a misnomer as regards the British people themselves, and, therefore, how much more so as regards the Americans! Anglo-Saxon was a name the British people had little claim to and hardly any reason to be proud of, considering that the Anglo-Saxons, after their conquest by the Normans, made scarcely any effort to assert their freedom. "They bowed their heads without resistance to a stronger and more energetic race," as Hardy observes. The British people and their language were composed of the best bloods and languages in the world commingled, but he (Mr. Brebner) believed the Normans had given the tone to the British people and their language. The Celtic and Danish elements were, however, much stronger than was suspected; and, besides, the use of the term Anglo-Saxon ignores entirely the large Scandinavian infusion of blood in Great Britain. The very forms of the old Anglo-Saxon were extinct, a point ignored by philologists in general. This was, however, a material point in the discussion. The forms of the letters and inflections of our present language were in a great measure the products of a *Lingua Franca*, or Norman language, mixed to a great extent with other languages. But all bloods and languages were so intermingled that apparently there was no pure blood, or race, or language in Great Britain.

Mr. BENDIR thought the subject an enticing one, as nothing could be of more interest to anthropologists than the question of stability of race. In the discussion that had taken place Mr. Bendir apprehended the term "American" had not been used by successive speakers with the same meaning. If an American were supposed to be a citizen of the United States, descending originally from English or other Euro-

pean parents, who, however, for a hundred years or upwards, had resided in America and not intermarried with immigrants,—if such persons existed, Dr. Knox's theory was not applicable to them. A previous speaker had asserted there were within his personal knowledge families such as he had mentioned, and they must be considered as the typical American. Another fact in contradiction to Dr. Knox's theory appeared to Mr. Bendir to be the very existence of the Mexican people, admitted to be a distinct race by every unprejudiced investigator. In vain had Mr. Bendir looked to Mr. Allan for some new facts or arguments to prove Dr. Knox's theory, of which the paper contained simply illustrations, and they displayed, certainly, considerable ability and could not but amuse the audience. Still Mr. Bendir felt disappointed, because Mr. Allan's paper did not advance science, and he suggested that his object ought to have been to show the progress that was made within the eighteen years which have elapsed since Knox first published his theory. Mr. Bendir believed there was evidence to show that the whites of the United States were more of a distinct race already than Englishmen in the Colonies, and he compared, in confirmation of that assertion, the "Americans" with the English in New Zealand. He did not agree with Mr. Brookes in considering the English an imperfectly formed race; on the contrary, he thought their racial character was distinctly marked; if there were not at present sufficient distinctions in American character to constitute a new race, there might be in the course of time; and it was the most scientific way of treating the subject to say, in the absence of more facts, that it might or might not be. He consequently suggested that neither Mr. Allan nor Dr. Knox had laid down an incontrovertible theory on the subject, but, though he disagreed from them in their general conclusions, he could not, on the other hand, concur with those who conceived that everything was so very original in the Americans. With regard to their literature, he did not perceive, as yet, much originality in it. He presumed to differ in that respect from Mr. Swinburne, for he had not found any originality in the poetry of Walt Whitman. There were in his writings many striking passages and some fine points, but interwoven with a mass of confused sayings, apparently put together by chance. With regard to their inventive genius, he believed it was not greater than that of some other nations, though in consequence of the scarcity of manual labour they had been urged to the construction of machines, by which such labour might be saved. The question of originality of race, however, was not to be decided by mental capacity only, but also on physical grounds, and facts and statistics were wanted to prove the supposed distinction.

Dr. DONOVAN said he had spent a few years in America, and could speak from some experience of the physical characteristics of the people. The question was—supposing that three hundred years ago the pilgrim fathers and mothers who emigrated from this country to America had been left to themselves, and had not intermixed with subsequent immigrants, would their descendants have formed a distinct race or people? His opinion was that they would deteriorate from the moment they landed in America; that they would have continued

to deteriorate, and that by this time not one of their descendants would be alive. He believed that when an Englishman went to America the extremes of heat and cold stimulated his nervous system often with good mental results, but after a certain time he began to sink and become enfeebled, and such must necessarily be the effect of the climate. The women become old looking and worn early in life; and the men were characterised by a remarkable weakness of voice, in consequence of the lungs diminishing in size. The nervous power might be great for a while, but the physical force diminished, and such diminution must be followed by proportionate mental declension. He believed that but for admixture and recent immigrants from Europe the race of the original English settlers would have utterly died out. He attached no value to the theory of acclimatisation. One of many proofs of the effect of the American climate on Europeans was, that they felt necessitated, not only to smoke, but to chew tobacco, and to drink spirits to supply the want of physical energy. Even in Australia the English deteriorated, though there is in that colony comparatively little difference from the European climate. In America the great changes of climate are sufficient to enervate the English in particular, and the extremes of climate produce many serious effects, and in treating the subject we should make it a question of the influence of climate on race; and especially of the effect of the climate of America on the English immigrants.

Mr. HYDE CLARKE said that the physical change which took place in the English born in America was not necessarily a degeneration, but some effect of climate, well worthy of investigation. The simple effect of transition from one climate to another, even two hundred miles from Smyrna to Constantinople, or *vice versa*, where the isothermal lines converged, would be felt as much as from Lisbon to London, where they diverge, and would show themselves in prickly heat, and other temporary affections, although the former was apparently the same. The transmitted effect of change of climate on offspring was of a permanent character, and to this he had, some time since, applied the term *creolisation*. It was more sensibly shown in the English race in America and in Australia. The Hollanders seemed less affected; and so far as he had observed, the Spaniards were not at all affected. There was no evidence that this change in physical appearance was accompanied by decline or extinction of the English race. It was possible to obtain evidence as to the extinction or propagation of races in America, and this should be done. From the New England genealogies, it would be found there were, at the present day, pure descendants of the pilgrim fathers; and so also of the Hollanders, who founded New Amsterdam or New York; but the expansion of the Hollanders had not been correspondent with their number at the cession: and so far as he had observed, the Dutch families in New York State showed a tendency to diminish by intermarriage,—the same was the case with the Dutch, or Germans, in western Pennsylvania, and with the Irish. A very remarkable instance of the expansion of a race was that of the French in Canada. At the time of the conquest, one hundred and ten years ago, the population of Ca-

nada did not exceed 30,000 ; and now, without immigration, it could not be estimated at less than a million, and it was well known that they had not intermarried, only exceptionally with either the English or Irish immigrants. With regard to the alleged fact of a new Mexican race being created, he denied the conclusions. What was taking place notoriously all over America, was the preponderance of the Indian element, now that mixed races were no longer kept up by the immigration of Spaniards ; and the Genoese, and other Europeans, did not intermarry. The example of South America, as of the West Indies, showed the working of this great law,—that mixed races can only be maintained against extinction, so long as there is an infusion of the two races, and that on the withdrawal of one race, the other preponderates.

Mr. M'ARTHUR said he had spent several months in different parts of America, and that when he first went there he was much disappointed at finding them less energetic and active than he expected. Those who inhabited the large towns, especially New York, were much less active than Englishmen. He thought that the difference in the personal appearance of the Americans arose as much from their mode of living as from the climate ; and he adduced several instances of their method of living, particularly noticing their fondness for sweets. He believed that in a great many of the English settled in America there was a certain degree of deterioration, but it did not amount to a distinction of race, nor did he think that they were likely to die out. In the country parts of America the people were different from the inhabitants of the towns, for they lived a more natural life, and there was in those parts as much physical strength and mental vigour as in England. The Americans in Boston were different from those in the south, and, generally, in proportion as the climate and mode of living approximated to ours, they more resembled us. In Australia and New Zealand the influence of climate in changing the character of the English settlers was also felt, but not to the same extent as in America. He had lived in Australia many years, and he had observed some change in the third and fourth generations. There was a difference, again, between Australia and Tasmania. The settlers in the latter were similar in their ruddy appearance to the English, and he fully believed that if the Tasmanians were left to themselves they would increase and prosper. He considered it would be the same in New Zealand and Australia, and he inferred that the result of continued occupation, without the infusion of new blood, would be not an extinction of race, but possibly in some places there might be more or less deterioration arising from difference of climate.

Mr. BLYTH observed that the present climate of the British Islands is highly exceptional, the influence of the Gulf Stream rendering it so very much milder than in other countries lying in the same parallel. Kamschatka for example. With regard to the acclimatisation of Europeans within the tropics, he instanced the French in Pondicherry, who have gone on for several generations without intermixture of fresh European or other blood in sundry instances, contrary to what has been repeatedly asserted as being possible ; and he remarked that

Chinamen seemed to thrive alike in every climate, whether hot or cold, humid or arid. The assertion that all acclimatisation is chimerical is at once refuted by the familiarly known fact of the rapid and excessive multiplication of our domestic quadrupeds in America and Australia; while in the bird class, let it ever be remembered, that our common fowl and the peafowl are indigenous to the hottest parts of India; while the Guinea-fowl, also, is a native of the torrid region from which it takes its name, it being a different species of its genus from the *meleagris* of the Romans of old, from which it is currently, but erroneously, supposed to have descended. The Musk, or so-called Muscovy duck, again, is indigenous to some of the hottest parts of South America. He did not believe that the Anglo-Americans, if left to themselves, would gradually die out in the western Continent, any more than the immense herds of horses and bovine cattle which had there reverted to wildness; but it was, nevertheless, true, as had been averred by the previous speaker, that the Anglo-Americans who reside in towns had contracted habits which are most injurious to their physical well-being, although the effects thereby produced did not amount to anything like a change of race.

Mr. LEWIS denied that the Americans possess any peculiarly great inventive genius. Inventiveness, he said, was in their case a question of supply and demand; and, as labour was scarcer among them than it was in Europe, their inventive powers had been exercised to a greater extent in constructing machines to supply its place. He protested against the assertion that the Americans had established an improved form of government, or any government at all; for their government was confessed by all parties among themselves to be thoroughly corrupt, and there was not an element of stability in it. He protested, also, against the use of the term Anglo-Saxons, which he considered meaningless and unscientific. Why, he asked, should the Saxons, even if allied with the Angles, be considered the only fitting representatives of the Jutes, Danes, Normans, Romans, and, above all, of that great fundamental Celtic element from which, it appeared to him, all that was good or great, or, perhaps, even respectable, in our national characteristics was derived.

Mr. HIGGINS, in reference to the asseveration of a preceding speaker, that statistics were wanted whereon to form an opinion on the subject of the paper, begged to refer the gentleman in question to a very valuable paper read before the International Statistical Congress at Berlin in 1863, by Mr. E. B. Elliott, the delegate to the Congress from the American Statistical Association. That paper gave ample military statistics of the United States; and there existed, indeed, a large body of statistics relating to the people of America. The statistics published by Mr. Elliott would, no doubt, throw considerable light upon the question as to the change supposed to have taken place in the physical character of the people. One fact which he had noticed in a cursory perusal of Mr. Elliott's paper appeared to deserve notice. It appeared that the number of recruits in the United States' army over six feet in height amounted to as many as 1,200 in 25,000, while in the English army the proportion was only one hundred and

thirty-two in the same number. The numbers over 5 feet 11 inches were equally disproportionate in the armies of the two nations. Making all due allowance for the somewhat greater age of the American recruits, it still seemed that the number of very tall men in the United States greatly exceeded that in England.

Mr. Cox expressed the opinion that transplantation from one climate to another does not necessarily deteriorate the race. In the case of the transplantation of Englishmen to America there might be deterioration, but when, on the contrary, Americans were transplanted to Europe, there would be an improvement. In the case of plants it was found that several of those introduced into Australia from England flourished so well in the new climate that they became evergreens, whilst if transplanted to the northern parts of America they became diminutive green-house plants. It was the same to a great extent with people who emigrate from one part of the world to another. They become changed, but whether they be improved or deteriorated depended on the fitness of the climate.

The DIRECTOR proposed that the further discussion of the paper should be adjourned to the next meeting.

The motion was carried, and the meeting was then adjourned to the 14th inst.

APRIL 14TH, 1868.

THE PRESIDENT, DR. JAMES HUNT, IN THE CHAIR.

THE minutes of the preceding meeting were read and confirmed.

The new elections were announced as under:—

Fellows.—John Cleghorn, Esq., of Wick, Caithness. Theodore Richard Schweitzer, Esq., London.

Local Secretary.—T. A. Campbell, Esq., L.T.P. & S., Glasgow, and L. M., Sydney, N.S.W.

Corresponding Members.—Babú Rajendralál Mitra. William A. Hammond, Esq., M.D., New York.

The following presents, received since the last meeting, were then announced, and thanks were voted to the donors.

FOR THE LIBRARY.

From the SOCIETY—Mémoires de la Société d'Anthropologie de Paris, 3rd fas., 1st fas.

From the EDITOR—Medical Press and Circular.

From L'ACADÉMIE ROYALE DE BRUXELLES—Mémoires Couronnés, vol. xxxiii; Bulletin 1867, No. 7; and 8vo, 19 & 20; Annuaire 1868.

From the AUTHOR—Annales Météorologiques; sur les Orages de Juin and Juillet, 1867.

From M. AD. QUETELET—Sur l'Age et l'Etat Civil de Mariés en Belgique.

From the EDITOR—New York Medical Journal, March 1868. By Messrs. Hammond and Dunster.

From the EDITOR—British Medical Journal.

From the SOCIETY—Proceedings of the Royal Society, No. 100.

From the AUTHOR—Intorno al Cranio di Dante. By A. Garbiglietti.

From the AUTHOR—Ricerche intorno alla Conformazioni del Bacino delle Donne Giavanesi. By A. Garbiglietti.

From the SOCIETY—Transactions of the Geological Society of Glasgow.
By John Young.

From the AUTHOR—Burmah and the Burmese. By K. R. H. Mackenzie.

The DIRECTOR (Mr. Brabrook) announced that the Council had that day appointed Mr. Edward Charlesworth as Travelling Secretary to the Society. The Council had also appointed Mr. William Winwood Reade as Visiting Secretary for Africa.

The adjourned discussion on Mr. McGrigor Allan's paper on Europeans and their Descendants in America was then recommenced by

The DIRECTOR, who briefly recapitulated the present position of the various questions that had been raised.

Major OWEN having been called on by the President to speak, said that he had never been in America, and his knowledge of Americans was principally derived from what he had seen of them in India; he could not, therefore, draw any comparison between the Americans in their own country and Englishmen. The climate of India was not suited to them any more than to the English, and in India, the third generation of Europeans does not exist.

Mr. MACKENZIE dissented from the opinions expressed in the paper. In the first instance, he objected to the term Anglo-Saxons, as a misnomer altogether; and he contended that those who are commonly called Anglo-Saxons are a mixture of several races. He thought it doubtful whether a pure race possessed enduring life; and he was disposed to think that those nations which were remarkable for prosperity and long continuance, must be composed of an agglomeration of different races; experience having shown that no pure races were able to govern themselves. At the same time he thought that pure races, after admixture with others, were likely after a time to be reproduced. He adduced several instances to support the opinion that the most flourishing and enduring people are those composed of a mixture of several races, and that the tendency of pure races is to die out. In America, the Red Man had disappeared; and the prosperity and greatness of the United States, he thought, was attributable to the circumstance that the population was made up of the surplus population of Europe. It was found to be impossible for the Red Man to exist in contact with European civilisation.

Dr. CHARNOCK said the American people were degenerate because they came from a bad stock, viz., from the worst portion of the British nation. In England, the climate was bad, the food bad, and nearly everything was bad; but notwithstanding, few people would emigrate to America who could remain in England. Then they took with them their boorish manners and their bad habits, and encumbered themselves with a cold, worn-out political institution, based on superstition, and culminating in spiritual wives. It was said that if

America did not, from time to time, receive new blood from the mother country, it would become depopulated on account of the climate and other causes. He thought this was going too far, because some people could live in almost any climate. No doubt, generally speaking, people would not flourish in a climate totally different to that in which they have been brought up; and therefore, emigration was, to a certain extent, carrying out the Malthusian doctrine, which must be done by some means or other. At the previous meeting of the Society, Mr. Lewis had ridiculed the term Anglo-Saxon, and had stated that all the great things in this country had been done by the British. He joined issue with Mr. Lewis with regard to the term Anglo-Saxon, which was the only one that could be used. He did not believe that there was much in common between the English and the Celts, and thought there was almost as much difference between them as between the English and the Chinese. The English language was based upon Anglo-Saxon, and had borrowed very little from the Celtic; it had, probably, not fifteen ordinary words from the Celtic language. In Great Britain, the English were the dominant race; and he was inclined to think that if ever the Celts should out-number them, they would still be so. If a people could not govern themselves, they must be governed by others.

Dr. NICHOLAS said, he had been struck with amazement at many things he had heard during this discussion; more especially by what had been uttered that evening. With regard to what had been said about the "Anglo-Saxon race," and what Dr. Charnock had said about the Celts not having power to govern themselves, and as to the English language not containing fifteen Celtic words, he would make a few remarks. He challenged Dr. Charnock to prove that the English language, as now used, does not contain many scores of Celtic words, or that one-half the words in the English dictionary were from the Anglo-Saxon. In considering the general question, it was important, he thought, to determine, in the first place, what was meant by "race"; and whether, when speaking of the "Anglo-Saxon" and of other races, they applied the term in the same sense. The Celtic race was better defined than most others; but when they came to speak of the "English race," and of the "Anglo-Saxon race" in England and America, they had a confusion beyond the power of man to unravel. He thought, as a scientific society, they ought to seek after an exact terminology, and that this word "race" should have a definite and fixed meaning. They could not derive a very large number of the inhabitants of England from the Saxons. The Romans left a large Celtic population in Britain, who were subsequently conquered by the Jutes, the Angles, the Saxons, and afterwards by the Danes and Normans. There was sufficient evidence, however, that the conquerors and the conquered became one united people; and the term "British race", he considered, might be more properly applied to the compound people now found in England, than "Anglo-Saxon". A large number of the chiefs who, with their followers, came over with the Norman army, were Celts from Brittany, Anjou, and Normandy itself, and that made the people more Celtic than before. This mixed

blood in the population, after a while, colonised America ; and had there been increased by incessant immigration, in which the Celtic element had greatly preponderated over the Teutonic, and the Irish characteristics had entered largely among the great mass of the American people. The question to be determined was the nature of that compound mass, which, he contended, was only Anglo-Saxon to a small extent. On those grounds, therefore, he objected to the term Anglo-Saxon : first, as applied to the people of England, and still more especially as applied to the Americans. Into the main branch of the question, as to whether admixture of distinct races was possible, and the apparent proofs of such admixture in America, he could not, at that hour, venture to enter.

Mr. HOLDEN (an American) said, he had for a long time observed in America the results of marriages of different races, and he had observed that the children have nearly always partaken of the character of one parent or the other, and that the blood cannot be mixed. He contended that it is impossible to mix even two widely different families, much less two different races. All attempts to mix the blood generally, resulted in reverting to one or the other of the original types. The same fact was observed in plants and seeds ; though there might be a temporary blending of two different kinds, after a time they became again distinct. The children of mixed races might have separate characteristics ; some features being similar to those of one parent, and some like those of the other, but they gradually changed, and became altogether distinct. In speaking of races, he meant those which were decidedly different. The Negro, for example, was a race distinct from the American and Indian, and the latter was distinct from the European ; they were divided by separate generic types, which could not be mixed.

The PRESIDENT observed, that Mr. Holden had brought the discussion back to the point from which it started. The paper was written in answer to Mr. Murray, who said he had been converted to Darwin's theory of transmutation of species, by the changes produced in Englishmen settled in America ; but Mr. Holden had shown that the changes produced by the mixture of distinct races were not permanent. He objected to the use of the words *race*, *type*, and *species*, as synonymous terms. Unfortunately, they did not know exactly what was meant by those terms ; but the tendency of scientific investigation was to show that race is distinct from species or type. Mr. Murray, who spoke on the first evening of the discussion, said, that there was no distinction at all, and that the divisions were merely arbitrary. He (the President) doubted the fact ; and he thought the tendency of science was to define species more distinctly, and that they were finding out every day new races and species of man. Mr. Swinburne had said that in America there are at least two writers who possess natures entirely different from any in Great Britain—Whitman and Poe. If that were the fact, he should be obliged to admit that a great change had been produced by transplantation from this country to America ; but he questioned whether the poems of Whitman were so very distinct from the poetry of England. On

reading them, he found nothing to warrant the assertion that there was so very great a distinction between him and other poets. Then as to Edgar Poe, he could not admit that there was in his poems anything essentially distinct; and even if there were, he should entirely ignore the conclusion, that it was evidence of the commencement of a new race in America. At the last meeting, Mr. Brookes denounced the views he (the President) had taken as to acclimatisation. He had to say, in reply, that the subject of acclimatisation was not under discussion. Mr. Brebner supported Mr. Brookes on that occasion; and that night they had had a speech from Mr. Mackenzie, who denied the national existence of a pure race. In opposition to that opinion, however, he believed that it is only when a race is pure that it can last. The Jews, Chinese, and Arabs, who are mostly pure races, undergo any change of physical conditions with comparative impunity; and he considered that those people who cannot stand change of climate, are of a mixed race. Whether blood cannot be mixed, and whether the influence of temperament was so great as has been stated by some writers, were questions, no doubt, of great importance, and had been brought before the public very ably by Mr. Hepworth Dixon, who had shown in his recent work great appreciation and knowledge of anthropology; and the time would come when they must go into those minute questions of the science of human nature. With respect to the different races existing in America, it was the opinion of Pruner-Bey and Desor, who were supported by several writers, that there is a perfectly new race now forming there. He doubted that it was so. There were as distinct tribes in America as in Europe, who preserved their distinctive types in a marked form, and all the change observable in them was a tendency to degenerate. But there was no simultaneous change, as Mr. Murray had stated, and to suppose so was perfectly preposterous. They differed from Englishmen only in a small degree, and had less vitality.

Mr. W. WINWOOD READE said that the impression made on him during the time he was in America respecting the *physique* of the people was this, the southerners were far superior to those of the north; the Kentucky men in particular, who were celebrated for their fine appearance. As to the general question of the paper, he considered that the Americans have decidedly a type of their own. The men are tall, thin, pale, with very little hair on the face, and their teeth decay early in life. The women suffer more from child-bearing than the English, and seem to be broken up by it, to which may be attributed the habit of abortion, which is common in the Northern States, even among married women. In Massachusetts, the oldest colony and where the people are purely of English descent, the change of type is very apparent. The people admit themselves that they are different from the English; but they assert that the change has been on the part of the latter, and they refer to portraits of Shakespeare and of persons who lived in the last century to show that the modern Americans resemble them, and that the English it is who have changed their type. The change in the Americans had been attributed to their peculiar food, and to the habit of eating hot bread;

but he thought it was attributable to other causes as well. Peculiar diet could scarcely account for the scantiness of hair upon the face.

Mr. BRENNER made a few observations as to the definition of the word *physique*, which he considered too vague a term.

Abstract of Reply.

Mr. J. McGRIGOR ALLAN remarked in reply, that the statement of the Rev. Dunbar Heath that six or eight different races would not always subsist under one government, was susceptible of two meanings ; either that the races would be fused into unity under one government, or that—a much more probable event—the various races would develop separate governments! The ultimate political separation of races in America he considered certain. He thought the French were not the descendants of Franks, but Gauls. Gallic ardour hurled them against Rome and to the Rhine, under the modern Brennus. In reference to Mr. Andrew Murray's remarks, physical distinctions did not prove a homogeneous race. Each European race preserved in America its respective characteristics. There was no distinction in character and *physique* which could not be accounted for by the conditions affecting transplanted races. Mr. Swinburne had disputed the statement of Mr. Clark Russell that Americans had no literature of their own. E. A. Poe was the most original of American poets. In life and character he greatly resembled Savage. Poe's dissipation caused his expulsion from the university, and interfered with his education. Whitman was a man of the people. As the intellectual aristocracy of America was modelled in the European type, the self-taught man was most original, most American. In *literature especially* was America a European colony! America would not agree to an international copyright, and the sharp practice of Saxon *pirates* was shown in the systematised robbery of British and American authors. If America *had* solved the problem of democracy, it would only prove Knox right in defining the Saxon as nature's democrat. But America had not solved the problem of constitutional freedom and individual rights. Messrs. Mill, Bright, and other eminent Liberals, erred in attributing American prosperity solely to her political institutions. It was owing mainly to her immense territory, which enabled her to get rid of the criminal element, which in Europe is constantly contaminating and polluting society. England used to shoot her human rubbish into Australia, until Saxon colonists told her to stop that "little game." Race, again! The severe and salutary satire of *Punch* would not be tolerated in New York. Lynch law threatened America with the worst of all tyrannies—King Mob. The intellectual classes were not satisfied with democracy (*vide "New America"*)!

In reference to Dr. Wood's remarks on prolific families in the south, easier conditions of existence might enable a generation or two to withstand the physiological law affecting transplanted races, but how long would they resist climate unsustained by European immigration? American leanness had been attributed to the hard labour of new settlers. It was not in new settlers the physical change was most apparent. The immigrant presented a marked contrast to the cold

American stock. The change was more observable in cities than in the rural districts. The destruction of teeth was attributed to the eating of hot bread. But why did colonists eat hot bread? Like the over-heating of Canadian houses causing a sallow complexion, it was one of the many, peculiar habits modifying *physique*, and attributable directly or indirectly to *climate*, to conditions affecting transplanted races.

Mr. Brookes had characterised the evidence against naturalisation as "facts of trivial character." Such they might seem to superficial observation, but not to scientific scrutiny. Alterations in *physique* were a solemn warning to intrusive races, that the climate had not been made for them, nor they for the climate. No human race thrives equally well in all climates. Like animate plants, each kind of man has his *habitat*. Transplant him, he decays quickly or slowly according to locality and other conditions. Observe the effect of the genial climate of North America (the land of promise, the safety-valve of the old world) on the strongest human race. The argument based on the brief duration of the colony (two hundred years) was *against, not in favour of*, naturalisation and acclimatisation. If in this *brief period* transplanted races are so changed that the distinction is palpable, and is delineated in caricature,—and this in spite of fresh blood continually pouring in,—why, suppose a native race in process of formation? Does nature form new races by *physical deterioration*? A marked indisputable symptom of decline is—*emaciation*. Early loss of teeth and hair, absence of beard, non-development of the female bust, spare figures, *false* voice, and pale complexion; such proofs of physical degeneracy are not *trivial*, but important anthropological facts bearing on the future of European colonies in America.

Mr. Brebnersaid, that Americans "fought well." He might have added, especially Irish, German, and other European immigrants! An English officer, serving in the southern army, had stated (in *Blackwood*) the impossibility of making American cavalry come to close quarters and cross sabres as in Europe. He had in vain set his troop the example of charging. Federal and Confederate horsemen invariably drew up and fired their pistols, without exchanging sword cuts. Mr. Allan thought the Normans had been to a great extent absorbed by the Saxons (see Nott and Gliddon's *Types*, Latham's *Eth. Brit. Isles*). From the departure of the Romans to the Norman conquest, more than six hundred years, England was under Saxon rule. Welsh, Irish, Gaels, know us to this day as *Saxons*, not as English. Dr. Donovan had supported all the views of the paper, almost in the author's words, which was the more valuable as the doctor had not heard the paper read. American mental vigour did not illustrate the "*mens sana in corpore sano*." Mormonism, religious mania, miscegenation, spiritualism, the folly called "woman's rights," all the extravagant ideas subsisting in society, like the unlimited use of narcotics, and other habits. All the peculiar political, social, religious "*American notions*," were reducible to direct and indirect influences of climate and conditions modifying transplanted races. Americans affected to despise and defy Europe; to be independent of the old

world ; of their race ; of the very blood flowing in their veins ; of the land whence they came ; whence they borrow everything ; isolated from which their very existence is precarious and uncertain !

He thanked Mr. Charlesworth for his courteous criticism. Mr. Charlesworth had asked, " why should emigration to America ever cease ? " Why has it to a great extent ceased in South America ? Why should America, possessed of its indigenous plants, animals, and *men*, be populated from Europe ? The Saxon having civilised the red man in the north off the soil of his forefathers, and cleared out Tasmania, was now busy destroying the Australian, New Zealander, and Caffre. These missions might divert emigration from America. The parallel between French and American women was not exact. There was a difference between small families and none at all ! The unwillingness to become a mother was stated as a remarkable fact, attributable to delicacy of constitution, causing child-birth to be doubly dreaded, as impairing beauty and likely to involve fatal results. He differed from Mr. Charlesworth as to the permanency of the Mexican half-caste, which could not be considered a *race* ! The *natives* were the only true *Mexicans*. The hybrid returns to the native stock. The withdrawal of European blood implied the ultimate extinction of the mixed breed (*see* Knox, pp. 109, 260). Mr. Allan had often heard the statement that Europeans grew taller in the colonies. He referred Mr. Higgins to Dr. Knox, p. 472, for an explanation of this statement.

In conclusion, Mr. McGrigor Allan had endeavoured to explode the popular fallacy which confounded colonising races forming an American nation, with an imaginary homogeneous people *sui generis* racially independent of Europe. North and south had been fighting like Kilkenny cats. No one but Mr. Andrew Murray had said, the Americans are at present a distinct race. Some thought they would become such. Judging from history, observing the utter failure of all Asiatic and European civilisation on the northern coast of Africa, he thought the formation of a Europeo-American race extremely problematical. He thought it an eminently practical anthropological question. If temperate America did not permit the naturalisation of transplanted races, the acclimatisation question might be considered settled in the negative. The paper had been well discussed. Valuable and interesting criticisms had been elicited. Many views which at first seemed *outré* and erroneous, might, on subsequent examination, appear logical and just. He did not undervalue objections to which time did not permit a reply. He had heard with especial gratification the remarks of two American gentlemen, Dr. Wood and Mr. Holden, respectively representing South and North. Their amicable criticisms rendered it superfluous for him to hope that his views, put forward with scientific candour, would not wound the feelings of any scientific American. He had reminded our American cousins of the close relationship between them and us. Blood was thicker than water. Britannia was proud of her " great plantation," and enlightened America thrilled at the history of our common ancestors, proclaiming, " There is life in the old land yet." His paper demonstrated the physical, moral, intellectual—in short, *racial* ties uniting the two great Eng-

lish-speaking nations of East and West. He believed the glorious and peaceful rivalry between Britain and America in arts, science, civilisation, and human progress, had no more powerful aid than the cosmopolitan science of Anthropology.

The meeting then adjourned.

The following is the speech of Dr. J. W. Wood on Mr. Allan's paper, referred to at p. cxlvi.

Dr. Wood stated that he had been nearly twenty-five years in the Southern States of America, and could not agree with the statements made by the author of the paper, or the principle laid down by Dr. Knox, that "Already the United States man differs in appearance from the European, and that America will still require European blood to keep up its people, and then be a kind of European settlement." His experience was that the people of the South are as healthy, strong, and as long-lived as the people of England; and as to physical changes, that is all fancy. As to the intermixture of European blood, *that* took place mostly in the Northern and Western States, where all the immigrants settled, the Southern States having been tabooed on account of their so-called slavery; the citizens of those states having been considered by unthinking people as men-stealers, pirates, and every thing that was bad, when the Southerners had never fixed a vessel to fetch a cargo of slaves: but this had been done by the English and Yankees. This view and a wrong understanding of the Southern people, had kept emigration away from this section of America, so he thought here we might look for a settlement of the question, and if any deterioration of body or mind had taken place it ought to be seen. He then gave a case of a Mr. Davis's family, Mrs. Davis having had twenty-four children, of which some sixteen or eighteen were living, and the old people when he last visited them were over eighty years of age. They were the third generation of native born Americans, and he knew their children, grand-children, and great-grand-children; and the third generation, to his own knowledge, were as strong, as healthy, as heavy, and he believed considerably heavier and taller than the average people of London, and this generation is at least the sixth since the family removed from London.

He desired to place the people of the South right before the Anthropological Society, and he stated that when he arrived in Tennessee, in 1844, the question was not "Is slavery right in and of itself," but, "what must we do with our slaves, now they are working and producing something? Turn them loose and they become a lot of worthless people, a mass of criminals, a clog to all progress, a regular tax upon the State."

The result at the present day is a convincing proof of their statesmanship, foresight, and knowledge of the negro's character, for the United States government has had to supply nearly three millions of starving people with something to eat this winter (1867-8).

Dr. Wood contended that the American people had not undergone any deterioration, at least in the Southern States, physically or mentally, and that they are as long-lived, as heavy, as tall, as robust, and

as strong as the people of Europe. He had come to this conclusion after having travelled (to see the effects of the war since its close in 1865) through the States of Tennessee, Virginia, North Carolina, South Carolina, and a good portion of Georgia.

Again, in the year 1842, Professor Drake stated in his work on the "Principal Diseases of the Valley of North America," that he took the stature and weight of 316 soldiers of the United States' army, consisting of,—native-born Americans, 155; Irish, 82; English, 17; Scotch, 10; Germans, 45; Danes and Poles, 7; total, 316. Nearly all of them between the ages of twenty and thirty years, and had attained their full stature, breadth, and weight. The Americans, Irish, and English were the tallest, and were nearly equal to each other in height; The Scotch, Germans, Danes, and Poles, were the lowest; but the stature and breadth of the whole of them were so nearly equal as to make no element worth taking into account. In calculating their weight it was as follows, average and greatest individual weight:—

Americans, average weight,	148 lbs. 9 oz.	greatest weight,	189 lbs.
Irish	" "	144 11	" " 192
English	" "	147 2	" " 183
Scotch	" "	146 8	" " 167
German	" "	146 1	" " 176
Danes and Poles	" "	143 7	" " 165

Making an average of the Irish, English, Scotch, &c. 145 lbs. 9 oz., or a difference in favour of the native-born American 3 lbs.

Dr. Wood then gave an account of the different families by name in Stanley Valley, Hawkins County, Tenn., embracing a distance of some six or seven miles of the length of the valley, and gave one family in detail as an illustration, of the name of Looney, which family had twelve children, all arrived at maturity and all living, except the youngest son, who was killed at the battle of Shilo; all the children are married except one, and reincreasing and multiplying almost equal to their parents; and he knows personally four generations of the family, which will compete in health, strength, and weight with any similar number of families in Europe. These families came originally from the Isle of Man, and had been in America for at least two if not three generations before he knew them. The other families were numerous, also, so no danger of dying out for want of *fresh European blood*.

He continued, Again, what does the United States census of 1860 show, by comparing the Southern States with the New States, West? Let us see. The State of Georgia numbered in 1840, 691,392 persons, and increased to 1860, a period of twenty years, to 1,057,829—whites 595,697, blacks 462,232; increase in twenty years, 23½ per cent.

Tennessee in 1840 . . . numbered 829,210
And in 1860 (20 years) . . . " 1,109,847

Whites 834,063, blacks 275,784; increase in twenty years 16 per cent. While the new State of Iowa in 1840 numbered 43,112, and in 1860, twenty years, 674,948; increase in twenty years 300 per cent. Cali-

fornia in 1850 numbered 92,957, in 1860 (ten years) 380,016; increase in ten years, 308 per cent. Oregon in 1850 numbered 12,093, in 1860 (ten years) 52,464; increase in ten years, 333 per cent.

Here in the Southern States is shown a natural increase without emigration, averaging in twenty years nearly 20 per cent. In the New States, where immigration is rife and fresh Europeans are continually pouring in, we find an increase of 314 per cent.

Further, Dr. Caldwell, Louisville, Kentucky, states a fact in his work, "Unity of the Human Race," pp. 155, that goes very strongly to establish my statement of no deterioration physically of the southern people. He says, "In 1821 five other American gentlemen and myself, who had visited Drury Lane Theatre in company, were indulging ourselves, between two acts of the play, in a promenade from end to end of the lobby. While thus amusing ourselves I observed that we were constantly gazed at by about an equal number of well-dressed young Englishmen, one of whom was by his costume recognised by us as an officer of the guards; though the party did not actually follow us, yet they kept their eyes so closely and unremittingly fixed upon us, and seemed to scrutinise our countenances and persons so strictly that I deemed their conduct singular at least, if not exceptionable.

"At length, in approaching them, I said to my associates, in a tone intended to be heard and understood by the scrutinising party, 'Those gentlemen we have passed so often and are now about to pass again, must have observed in us something very singular to them, but whether agreeably or disagreeably so I neither know nor care; their eyes have been thus unceremoniously riveted on us for the last five or ten minutes with a degree of intensity not usual anywhere, and not tolerated in well-bred society.'

"As we again approached them, on our return movement, the officer of the guards stepped a few feet ahead of his companions, apparently for the purpose of speaking to us. In relation to my associates I made a similar movement, and assumed a like position; and we both simultaneously bowed and touched our hats. Laying his hand gently on my shoulder, the officer said in a mild and courteous manner, 'I perceive, Sir, you have observed my companions and myself fixing our eyes on your friends and yourself more frequently and intently than you thought the occasion required or perhaps justified; but I beg to assure you that a want of respect formed no part of our motive for doing so; our only reason was the curiosity and attraction produced by your size and figure, each of which, you must yourselves acknowledge, is sufficiently impressive to excite more than common attention.'

"This reply, producing instinctively a more discriminating glance of my eye at my friends than I had hitherto indulged, I perceived that I myself, surpassing in stature six feet and an inch, was, notwithstanding, nearly two inches lower than the next lowest of the Americans, and fully three inches lower than the tallest of them, and our proportions corresponded, and we were all Southern Americans. A few jocular remarks respecting Southern productiveness and Southern growth terminated our conference, and the rising of the curtain recalled us to our seats."

Dr. Franklin, while American agent at Paris more than forty years before the above took place, satisfactorily settled the same principle in a very complete manner, at a public dinner for the Abbé St. Pierre—for the Abbé delighted to expatiate on the degeneracy of Europeans in America, and his favourite theory was the same as Dr. Knox's and that laid down by the writer of the paper.

"Monsieur l'Abbé," said Dr. Franklin, "in a case of controversy, when facts and demonstration can be resorted to as arguments, those of mere words should be abandoned. You contend that the man of America is belittled, and therefore inferior in size and strength to the man of Europe." "I do," replied the Frenchman. "There are seated," rejoined Franklin, "on each side of you three French gentlemen, and on each side of me three Americans; and neither of the parties are picked men, but fair representatives of the stature of their respective countries; will you and your friends, therefore, have the goodness to rise, and I and mine will do the same, and let the company present decide which are tallest and largest, the French or the Americans?" No sooner said than done; the fourteen gentlemen were instantly on their feet, and in *stature and girth, height and weight*, the smallest American was a demi-giant compared to the largest Frenchman. The question was *self-decided*, and the spectators had an unanimous and hearty laugh at the vanquished Abbé. This anecdote was given by President Jefferson.

Thus, Gentlemen, I have given you my own observations at the present time, 1868; the opinion of Dr. Caldwell in 1821; and that of Dr. Franklin about 1780. This is no new subject, the belittling and degeneracy of the descendants of Europeans in America; it has been refuted again and again for the last century.

In regard to the American women, I must say, in reply to my friend Dr. Donovan, that the ladies of Tennessee and Georgia are, so far as my observation goes, the handsomest in the world, and their labours and endurance during the late war justify me in saying, they have no superiors in energy and endurance. It is stated by Dr. Knox, that "*In both sexes the adipose cellular cushion interposed between the skin, and the aponeurosis and muscles, disappears, or, at least, loses its adipose portion, the muscles become stringy and show themselves, the tendons appear on the surface, symptoms of decay manifest themselves.*"

In reply to these sweeping charges I refer to the ladies themselves, and if any gentleman will go through Tennessee, Georgia, or South Carolina, he will find thousands of as fine, handsome, and well-formed women as can be found in the world; and as handsome, intelligent, refined, kind, and affectionate old ladies, mothers, and grandmothers, as can be seen in England or anywhere else.

In reply to the early decay of the teeth, during the first evening's discussion, I believed that to be as stated, but as my attention was directly called to the subject, and having next day to go by railroad a considerable distance, and there being in the carriage five women, ages running between eighteen and thirty-three, I noticed them very carefully. The first, eighteen years of age, had lost some two or three;

the next, a young mother, say twenty-three, with a baby, had lost a number; the next in age was sickly, her teeth were black and decayed; the only one whose teeth were sound, clean, and smooth, was the oldest, and she was a Scotchwoman! Before this meeting I attended a holiday (Good Friday) at Battersea Park, and walked around for hours, and noticed hundreds of young girls and women, and I must say the American women are but little worse than what I saw, *if any*; it was the same in Hyde, St. James, Regent's, and Greenwich Parks, all of which I visited to compare and satisfy myself of this truth. One thing which I notice very plainly is, that the skins of the English women appear thicker and coarser than those of the Southern women, but, the same as I see in the Northern States—they have also on an average more adipose matter, but have not that elegance of carriage and nervous temperament possessed by the Southern ladies.

Again, in reply. Now what do these signs—added to the uncertainty of infant-life in the Southern States, and the smallness of their families in the Northern—indicate? (Knox, 74.) Professor Barton, late of New Orleans, Louisiana, in one of his lectures, states some facts which I think will carry out strongly some of the points I have touched upon. He says:—

In New Orleans there was 1 child in every 3.96 of the inhabitants

Baltimore	"	"	1	"	"	3.68	"	"
Philadelphia	"	"	1	"	"	4.38	"	"
New York	"	"	1	"	"	3.88	"	"
Boston	"	"	1	"	"	4.35	"	"

Or one child to every $3\frac{3}{4}$ persons; so you will perceive that Dr. Knox's theory is not very sound, either about the North or the South.

And in old age the Southern States are hard to surpass, for Dr. Barton gives the following figures:—

In the City of Boston there was 1 person over 100 years of age in every 61,392.

In New York . . . 1 in every 8,570 persons

In Philadelphia . . . 1 " 3,094 "

In Baltimore . . . 1 " 1,300 "

In Charlestown . . . 1 " 2,329 "

While in New Orleans 1 " 997, or there were

in New Orleans 61 persons over 100 years of age to 1 in Boston.

The States show somewhat different figures to the cities, yet considerably in favour of the South. In the State of Massachusetts there were over 100 years of age, 1 in every 10,517 persons; in Pennsylvania, 1 in every 9,765; in North Carolina, 1 in every 2,081; in South Carolina, 1 in every 2,441; in Louisiana, 1 in every 1,608, or in the State of Louisiana $6\frac{1}{2}$ persons over 100 years of age to every one in the State of Massachusetts. These facts, gentlemen, I think, furnish a full reply to the above, and give an answer to the question, "Now what do these signs, added to the uncertainty of infant life in the Southern States and the smallness of their families in the Northern, indicate? Not the conversion of the Anglo-Saxon into the Red Indian,

but warnings that the climate was not made for him, nor he for the climate." Dr. Knox never was in America.

In conclusion let me add, it is equally as unlikely for the American people to require fresh addition of European blood to keep that Continent populated, as it is for England to require fresh blood from Yankee-land ; if either, it is more likely that England will require the fresh supply, for if you will go with me and examine your hospitals and public institutions, and examine the diseases of the chest, consumption, heart-disease, scrofula, and the skin diseases produced by *your forced vaccination*, you will almost conclude that the mass of the English people cannot be very sound or healthy.

MAY 5TH, 1868.

THE PRESIDENT, DR HUNT, IN THE CHAIR.

The minutes of the previous meeting were read and confirmed.

The Fellows elected were announced as under:—R. L. Nash, Esq. ; W. P. Colchester, Esq., of Cambridge ; F. G. C. Wölber, Esq.

Honorary Fellow—Professor Bonsdorff.

The following presents were announced to have been received, and the thanks of the Society were given to the donors:—

FOR THE LIBRARY.

From the SOCIETY—Bulletins de la Société Impériale des Naturalistes de Moscou, 1867, Nos. I and II.

From the SOCIETY—Translations and Proceedings of the Royal Society of Victoria, part 2, vol. viii.

From the AUTHOR—Reliquiæ Aquitanicæ, April 1868, by Edward Lartet.

From the AUTHOR—Sociale Juristische Studien, by R. H. Ulrichs.

From the EDITOR—British Medical Journal.

From T. SQUIRE BARRETT—The Song of Songs. Anon.

From the EDITOR—Medical Press and Circular.

From the SOCIETY—Transactions of the Royal Society of Literature, part 1, vol. ix.

From the EDITOR—Revista de Bellas Artes é Histórico-Arqueológica. Edited by D. Francisco M. Tubino. Second Series, vol. iii, Nos. 76, 77, and 78, Madrid, 1868.

From the AUTHOR—Admission of Educated Natives into the Indian Civil Service. By Dadabhai Naoroji.

From the EDITOR—Medical Press and Circular, April 29.

From the EDITOR—The Farmers' Journal, March 31 and April 20.

From A. C. BREBNER—On the Re-settlement of the Seed of Abraham, by Major J. Scott Phillips ; and The Magnetic Orbit, by the Rev. H. M. Grover.

FOR THE MUSEUM.

From Dr. SHORTT—A Series of Fifteen Skulls from India, and Thirty-six Photographs.

MR. C. STANILAND WAKE then read a paper on the "Psychological Unity of Mankind," of which the following is an abstract.

In it the author contended that, as it had often been said, the *human* race, considered as an organic whole, resembled an individual man ; therefore, it must have had an infancy, childhood, youth, and manhood. It would be interesting to endeavour to trace this, in various stages of development, through the various families of mankind now existing. In the case of the European mind, its successive stages of evolution might be classified as that of the *child* whose actions have relation wholly to *self*; that of *boyhood*, in which the *will* is especially active, often accompanied by the exercise of *cruelty*; the *youthful* period, in which the *emotional* nature is the most predominant; that of *early manhood*, which may be described as the *empirical* stage, in which the *imaginative* faculty is the most active; and finally, *actual manhood*, in which *reason* has established its influence.

On a search among the several great divisions of mankind for representatives of these stages of individual progress, it would be found that the oldest and most uncivilised of the races answer to the earliest stage. The character of the aborigines of Australia has been described by a late writer as "one of unmitigated selfishness." In the aborigines of the North American continent, the second mental phase is exemplified. The chief mental characteristic of the American Indian being *strength of will* combined with natural *cruelty*, admitted by their most zealous advocates to be a leading trait of their character. This cruelty, resulting from the thoughtless activity of the wilful "*self*," the continuance of which appears to be usually co-extensive only with that of the thoughtlessness which gives to selfish action its abhorrent character, is also exhibited, although less prominently by the aborigines of Australia. The *emotional* stage of human mental development would seem to have its closest counterpart in the mental condition of the Negro. *Subjectively*, the youthful phase of the civilised mind would appear to be exactly similar to that which is observed among the Negroes, as a race. In each of the preceding stages, the *selfish*, the *wilful*, and the *emotional*, which may be classed together as developments of man's *sensuous* nature, there would be necessarily a certain admixture of "intellectual" activity. This is increased in the next, or *empirical* stage, that of early manhood, which is most perfectly represented by the Asiatic, or Turanian family of peoples. The Asiatic mind is extremely active in relation to the simple phenomena of external nature, and the application of the knowledge thus gained to the satisfaction of physical wants. It would appear, however, to be incapable of generalising from its observations; and hence the absence of any actual science among even so civilised a people as the Chinese. The Hindoo mind, while it has much in common with that of the Turanian, presents a great contrast to it. Empirical thought is that which governs the civilisations of both Chinese and Hindoos; but whilst in the one case it has for its object the simple experience of life; in the other it almost overlooks the mere facts of science, and becomes active about the first principles of nature itself. We must look to the European intellect for the

phenomena which distinguish the *rational* stage of man's mental development ; and judging from the results of its activity, we must say that the full manhood of humanity expresses itself in this the youngest and most perfect of the races of mankind.

If the analogy thus drawn be well founded, we are justified in believing that before the European race could have reached its perfect stage, it must have passed through all the intermediate phases of development, and that these can be reproduced by observation of the present condition of the inferior races of man. This conclusion must, however, be somewhat qualified ; as the peculiarities of inferior peoples, which constitute these race characters, can never have been so strongly marked in those which have progressed further in the process of evolution. Therefore, the present imperfection of inferior peoples is not necessarily introductory to the more perfect development exhibited by the European. Probably the Australian and American aborigines have continued so long under their present conditions of existence, that the race cannot be improved, and even the Negro and Asiatic races appear to be incapable of making any further progress *from within*. The primitive "equality" of all the races of man does not necessarily suppose their common origin. This equality, however, disposes of the question of a primitive plurality of *races* ; and, therefore, the *reason* for requiring a plurality of origins ceases. Moreover, the lapse of time required for the formation of race characters accounts, also, for the universal spread of man over the globe. Even if we suppose the *ape* origin of man, it is very unlikely that he has had more than one centre of origin. For the highest and lowest human types resemble each other much more closely than either of them resembles the ape ; and it is more probable that the superior races of man have been derived from inferior ones, than that they have had independent ape origins.

The thanks of the Society were voted to Mr. Wake for his paper.

Mr. PIKE said that the European races which have attained the highest development, the highest emotional feelings were combined with the highest intellectual powers, and no broad line could be drawn between emotion and intellect. In ancient Greece, for instance, the highest degree of art existed at the same time with the highest intellectual power. Neither could the supposed selfish and wilful periods of development be separated, and the alleged analogy of certain races and certain stages of development could not be sustained by facts. The facts adduced to prove the psychological unity of man would equally prove the unity of all mankind ; and not only that, but it would involve the unity of all mammals also. The young of all species of mammals exhibited similar emotional feeling in their activity and playfulness, and, as regards emotion, it was impossible to draw a line between them. There is uniformity, but there is diversity also between the English and the Germans, yet all possessed the same emotions and faculties differently developed and in different proportions. It was a difference of degree and not of kind. He did not think the author of the paper had proved the psychological unity of all mankind apart from that of the unity of all mammals.

The discussion was continued by the Rev. D. Heath, Mr. Dibley, Mr. Dendy, Dr. Donovan, Mr. Charlesworth, Mr. Mackenzie, and Mr. McGrigor Allan.

The PRESIDENT said Mr. Pike had well pointed out that if Mr. Wake had succeeded in proving the psychological unity of man, he had proved also the psychological unity of all, or nearly all, forms of animal life. There was a gradation rising successively from the lowest stages of sensation, motion, and consciousness to the highest stage of intellectual existence; and all the arguments advanced in support of the psychological unity of man might be applied to a greater portion of the animal kingdom. The paper appeared to be an epitome of Mr. Wake's book, but he could not find out distinctly what were the opinions expressed by the author in either the one or the other. So far as he understood them, Mr. Wake's views as published in his book were common about a century ago, and the present paper seemed to revive the metaphysical disquisitions of that period. He thought it was impossible to found a science on the supposed unity of the human race.

Mr. WAKE, in replying to the remarks on his paper, said it was not intended to enter fully into the subject, but to take a general view of it. With regard to the special distinctions of race, he observed that he did not intend to signify that the five distinctive qualities he mentioned were possessed exclusively of all others, but that each one was predominant in different races. All human races showed a portion of intellectual development, but in the lower races the instincts were predominant. With respect to the mental development of animals, he believed that they did possess a certain portion of the reasoning faculty, but that it was only carried to a certain point. The unity of man was, however, only the secondary question. What he meant by the psychological unity of man was that each race shows a certain kind of mental activity peculiar to itself. He was willing to admit the psychological unity of man was connected with that of the animal kingdom.

The meeting then adjourned to the 19th inst.

MAY 19TH, 1868.

THE PRESIDENT, DR. HUNT, IN THE CHAIR.

The minutes of the previous meeting were read and confirmed.

The Fellows elected were announced as under:—Frederick Griffin, Esq., 1, Palace Gardens, W.; Lieutenant S. P. Oliver, R.N., F.R.G.S., Royal Arsenal, Woolwich; Robert Crawford, Esq., Westbrook, and Reform Club, S.W.

Hon. Fellow—Dr. Guistiniano Nicolucci, Isola de Sora, Italy.

Corresponding Member—Mons. le Contre-Amiral Vicomte Alphonse de Fleuriot de Langle, Chateau de Pradalan, Morlaix, Finistre, France.

Local Secretaries—Alexander Downing, Esq., M.D., Granada, Nicaragua, for Granada; Charles Gilman, Esq., Greytown, Nicaragua, for Greytown; Frank Ramsey, Esq., M.D., M.A., for Memphis, Tennessee, United States.

The presents received were announced as under, and thanks were voted to the donors:—

FOR THE LIBRARY.

From S. PHILLIPS DAY, Esq.—Philosophy as Absolute Science, by E. L. and A. S. Frothingham; History of the Old Cheraws, by the Bishop of Texas.

From the EDITOR—Medical Press and Circular, May.

From the SOCIETY—Proceedings of the Royal Society, No. 101.

From S. GUPPY, Esq.—Mary Jane. Anonymous.

From the SOCIETY—Bulletins de la Société d'Anthropologie de Paris, June 2nd, Série 5 fas.

From the AUTHOR—Researches on the Nature and Action of Indian and African Arrow Poison, by Dr. Beigel.

From the AUTHOR—Oversigt over det Kongelige danske Videnskabsnernes Selskabs, Nos. 5 and 7, by J. S. Steenstrup.

From the ACADEMY—Proceedings of the Academy of Natural Sciences of Philadelphia, Nos. 1, 2, 3, and 4.

The DIRECTOR having announced a resolution of the Council expressing their regret at the death of Mr. John Crawford,

The PRESIDENT remarked that he but expressed the general feeling of the Society when he said how deeply they all deplored the death of that gentleman. There were few who were not conscious of the great enthusiasm and interest with which he entered into every subject connected with anthropology. It was fifteen years since he first became acquainted with him; and eleven years ago, when connected with the Ethnological Society, he had proposed Mr. Crawford as the President of that Society. Since that time they had been working together, and he never knew a man who evinced more enthusiasm and who took as much interest in the science. During the first five or six years that Mr. Crawford was President of the Ethnological Society, he (Dr. Hunt) had been associated with him as the secretary of the Society; and during the whole period, though at times apparently opposing each other, they never had a quarrel nor had an unfriendly word passed between them in private, but, on the contrary, they were the best of friends. That was sufficient to show Mr. Crawford's good nature. His loss would be greatly felt in anthropological science, and there was no one whose loss would be so much felt at the meetings of the British Association. He had for long supported the opinion of the diversity of the origin of man, and he latterly became convinced and taught that the so-called races of man should be called species. Now that he was gone, he (the President) might say that the petty differences which were supposed by many to separate them never existed, and he joined most sincerely in expressing the regret which all must feel that a man so thoroughly honest and outspoken should have gone from us.

Mr. CHARLESWORTH made a communication on the subject of recent discoveries of flint implements in Norfolk.

The Rev. J. GUNN, a member of the Norwich Geological Society, who was invited to take part in the discussion, stated that most of the flint implements found in the neighbourhood of Thetford were ribbed or scratched, and he had come to the conclusion that they were equally distributed over the gravel beds and not limited to certain localities.

The PRESIDENT observed that the subject required further investigation, and the council having deputed Mr. Charlesworth to go to Norfolk for that purpose, they should hear more about these caves and their contents next session.

The thanks of the Society were then voted to Mr. Charlesworth and to the Rev. J. Gunn for their communications.

A paper was then communicated by Dr. Barnard Davis, "On the Skeleton of an Aino Woman and on three skulls of men of the same race," which will be printed in full in the *Memoirs*.

Thanks were given to Dr. Davis for his paper.

After some remarks from the President,

The meeting was adjourned to the 2nd of June.

JUNE 2ND, 1868.

DR. JAMES HUNT, F.S.A., PRESIDENT, IN THE CHAIR.

THE minutes of the last meeting were read and confirmed.

Dr. Alfred Wiltshire, Queen Anne Street, Cavendish Square, was elected a Fellow.

The presents received since the last meeting were announced as under, and thanks were voted to the donors:—

FOR THE LIBRARY.

FROM THE EDITOR.—Examination and Confession of Certain Witches.

By H. Beigel, Esq., M.D.

FROM THE SOCIETY.—Proceedings of the Society of Antiquaries of Scotland, vol. 6, part ii.

FROM THE AUTHOR.—Ueber Germanische Grabstätten am Rhein.

By Prof. H. Schaaffhausen.

FROM THE EDITOR.—Medical Press and Circular.

FROM THE INSTITUTE.—Giornale de Scienze del Inst. di Palermo; 1867, vol. iii. fas. 4.

FROM THE AUTHOR.—The New Principia. By Captain Morrison, R.N.

FROM THE AUTHOR.—La Géographie et les Monuments du Pérou.

By E. G. Squier, Esq.

The following communication from Mr. HYDE CLARKE was read.

NOTE ON CREOLISM.

I designate as Creolism that change which takes place in the offspring of Englishmen born in certain other countries, and presenting

what is called a Yankee appearance, narrower figure, greater height ; high narrow forehead, and loss of several teeth before 28, with a nasal twang in speaking.

The countries in which this takes place as yet observed are the United States, including Canada, and Australia.

The phenomenon is sometimes observed in the first birth after migration, but a subsequent birth may present the features of the recognised English type.

Children of English type likewise appear in Creole families.

The following points require investigation :

Are Englishmen, Irishmen and Germans affected in this way, or any other race ?

Is there any limit in the Southern States of America ? This appears doubtful, as the phenomenon is recognised in the cold of Canada and the warmth of Sydney, and does not appear to depend on temperature.

Does the phenomenon affect hybrids from negro mothers in the States, does it extend to New Zealand, and does it affect Maori hybrids ?

Must the gestation be performed in the new climate ; that is, are Yankee children born, which have been conceived previous to the migration ?

How long after migration are examples known of Yankee children ?

Is the proportion of births of English type greater in immigrants or in their descendants ?

13th April, 1868.

HYDE CLARKE.

Mr. McGRIGOR ALLAN observed that there is a great difference of speech between the Canadians and the native citizens of the United States ; and that there is no Yankee twang in the speech of the former.

Dr. BEDDOE remarked that with regard to the stature of the Americans, more valuable evidence was given in the work of Dr. Hammond on Hygiene (p. 29), which contained the measurements of 100 men who were recruits for the army from each of eighteen states, and in most instances the heights were far above those in our army. We had made one estimate of the height of recruits for the British army ; and in nine of the American states it was as much as two inches higher. Further south the men were yet taller, and in Georgia no less than 30 per cent. were 6 feet high. It was doubtful whether there was any district in England in which the majority of the men were of that stature.

The next communication was contributed and read by Dr. BEDDOE.

On the Physical Characteristics of the Danes.—[Abstract.]

The paper was founded on a series of measurements made on twenty-eight seamen from various parts of Denmark, continental and insular. This number was, of course, too small for any very definite conclusions to be placed upon the data ; but from which, however, Dr. Beddoe inferred that great variations occurred among the Danes with respect to the *modulus* of breadth, some of them being strongly

dolichocephalic, while others are brachycephalic. The average Danish head appeared to be somewhat broader than the Swedish, resembling more nearly the average of Northern Hanover. The prevailing form was almost elliptical. The hair was light brown, flaxen, or yellow, except in six men, who were mostly long-headed.

The thanks of the meeting were voted to Dr. BEDDOE for his paper.

The PRESIDENT said that there is no subject so interesting in the study of practical comparative anthropology as measurements of the living head, which were very difficult to make. He had attempted to do it in Norway with some success, but the difficulty of doing so by the rules prescribed appeared to be owing to their being too numerous, and after all, the measurements so taken did not give everything that was wanted. Something was required to simplify the mode of taking measurement and to secure greater accuracy. Some points ought to be settled from which the measurements should be taken, and they should then be carried out on a more extensive scale. He doubted whether it could be done satisfactorily with the calipers and tape only. The first thing required was to ascertain the cephalic index of different people.

Mr. PIKE remarked that he was present rather as a listener than as a speaker, and that all facts brought to the notice of the Society by Dr. Beddoe were of the greatest value, because they were always collected with care and discrimination, and their salient features always exhibited with skill. There were, however, one or two points on which questions might be raised in the interests of science. The use, for instance of the term Celtic in the classification of head-forms appeared to have in it an element of confusion, because while Dr. Beddoe, our leading investigator of physical characteristics, attached one meaning to it, Dr. Broca and the French Anthropologists attached another. By Celts Dr. Broca understood a people short of stature, possessing round heads and inhabiting chiefly the centre and south of France; in its chief characteristics this people was wholly different from the tall bulky, and long-headed race also called Celts in the West of Ireland. Until all Anthropologists could agree upon their nomenclature it would be impossible to convince the public of those truths which were being gradually brought to light by Anthropology. Mr. Pike confessed that he felt a certain sense of gratification at the admission that there was a decided tendency to brachycephalism among the Danes, because it confirmed his own views and, to a certain extent, filled up a gap in his own evidence. He did not, however, wish to make too much of the evidence of twenty-eight heads, which suggested but did not establish a certain conclusion; and even that evidence lost some of its strength from the fact that it was drawn from the seafaring population which must of necessity be the least pure. The one instance of extraordinary diversity from all the rest of the Danes examined could not of course, prove anything by itself, but the affinities described by Dr. Beddoe could not fail to recall the fact that Denmark was once the home of the people called the Cimbri, and that the same name was to be discovered in Britain. In spite of the philologists, who were in the habit of scouting any theory not based upon philology, the discoveries

of modern science pointed more and more to the conclusion that the controversy concerning the origin of the English must end in the defeat of the Philo-Teutons. Even if it were admitted on one side that the Angles and Saxons exterminated the Britons, it would have to be admitted on the other that the Angles and Saxons themselves were long-headed Cimbri, changed in speech, but not in blood, by the short-headed Teutons who had long been pressing upon them. Science could not distinguish accurately between British and Cimbric, but it could demonstrate clearly that the English nation was either British or Cimbric, and not Teutonic.

Mr. LEWIS suggested that it was very desirable to attend to the physiognomy and other physical characters of a people, as well as to the measurements of their heads.

Mr. DENDY agreed with Mr. Lewis as to the limited scope which mere craniology afforded of gaining a knowledge of the characteristics of a people. There were, no doubt, more valuable points in Dr. Beddoe's paper, but several objections might be made to the stuff he had to work on, and he thought it would have been better had he given with the measurement of skulls the ages of the individuals, for age makes a wonderful difference in the form of the cranium, which was constantly altering. In the measurement of living heads, also, there was great liability to be deceived by taking the measurements from different points, the determination of which should be carefully attended to. With regard to the mixture of races indicated by the differences in the measurements, he thought that the head particularly alluded to as being so different from the others must have been that of a mongrel, and not an Irishman. He considered that too much importance was attached to the measurements of crania, which, from the various modes of taking them, were often very vague. Physiognomy, he thought, had everything to do with the characteristics of a people, and not only the features but the limbs and general appearance of the individual should be taken into consideration; he wished to do away with the bigotry in such matters which had hitherto obstructed the progress of true scientific investigation.

Mr. McGRIGOR ALLAN agreed in thinking that the measurements of the skull generally adopted were too numerous. The three measurements that were of the most importance were the length, the transverse measurement from the top of one ear to the top of the other, and then the circumference, in taking which the tape should go round the supraciliary ridges. With regard to the assertion that the skulls of Germans are broad in the temporal regions, that observation of Dr. Beddoe's applied, he thought, more particularly to the inhabitants of the South of Germany; but Dr. Knox had said that the people of the South of Germany are not pure Germans, but mingled with the Slavonic races, and that all the genius and intellect of Germany come from them.

Dr. DONOVAN said, it was pleasant to those who had been measuring and studying skulls all their lives, to find that the Members of the Anthropological Society had at length got the courage to talk about the head at all; and that they were coming round to phrenology in

the guise of craniologists. But as yet they said nothing about the brain and its functions. What, he asked, were they measuring heads for, and why go to Norway and Sweden for measurements unless those measurements gave some information as to the characters of the people? What inferences did they draw from such measurements?

Dr. BEDDOE, on replying to the remarks on his paper, noticed, in the first place, the observation of the President respecting the great number of the measurements. He said that though the measurements might appear to be numerous, every one of them was taken with some definite object; he thought, however, that the system of measurements might be improved, so that they might be taken more easily. The proposition of Mr. Allan to take only three measurements would, he considered, be found insufficient, and lead to error. In reply to the question, why he had not taken the forms of the facial features, he said that his measurements had been objected to from being too numerous already, and that to take measurements of the features would be more difficult than of the head, as, indeed, no correct idea of the features could be formed from measurements, and it could be better obtained from words. He stated that he always took notes of the features, some of which he had mentioned in the paper, and he had contrived the means, by using symbols, to take a portrait of any man in less than a minute, which served to reproduce the face to himself. He attached much importance to the features, which he considered to be as hereditary as the form of the skull. The varieties of colour, and the differences in other respects observed in the neighbouring valleys in Norway and Sweden, he was inclined to attribute to varieties of race; for in some places there might be a purely Aryan population, and in others the people might be, more or less, of Finnish descent. Similar differences were found to exist in the valleys in the Highlands, which were capable of explanation in some instances. The Danes might be expected to be more homogeneous than the Norwegians, owing partly to the different geographical characters of the two countries. There was some reason in the objection raised by Mr. Pike to the word Celtic, but it was difficult to replace it by any other term. He meant by a Celtic form of head a certain form which occurred in all countries to the population of which the name of Celtic has been given, and which had been described by Dr. Daniel Wilson and by himself; whether it was or was not a true Cimbric skull he would not say. Such a form was more common in Ireland than in Wales. He believed that the long-headed and handsome fair race was destitute of poetical genius and of genius generally, and that they were found more in the north than in the south.

The meeting then adjourned to the 16th instant.

JUNE 16TH, 1868.

H. G. ATKINSON, ESQ., V.P., IN THE CHAIR.

THE minutes of the previous meeting were read and confirmed.

The following were elected since the last meeting :—

Fellows.—Rev. John Gunn, Iinstead Rectory, Norfolk; Andrew Struthers, Esq., Fernando Po, Africa; C. W. Kaye, Esq., High Bentham, Lancaster.

Corresponding Members.—Victor Baron Von Erlanger, Wiesbaden; Dr. Petermann, Gotha.

Local Secretary.—Andrew Struthers, Esq., Fernando Po.

The presents received since the last meeting were announced as under, and thanks were voted to the donors :—

FOR THE LIBRARY.

From the AUTHOR.—Letters to the College of Physicians of Louisville. Dr. H. J. Hul-Cee.

From the INSTITUTE.—Journal Royal United Service Institute.

From the EDITOR.—The Farmers' Journal.

From the EDITOR.—The Medical Press and Circular.

From the AUTHOR.—Ueber das Zweckmässige in der Natur. Professor Schaaflhausen.

From the INSTITUTE.—The Canadian Journal, Dec., 1867.

From J. W. CONRAD COX, Esq.—Lavater's Physiognomy.

FOR THE MUSEUM.

From Dr. DIEZMANN.—Skull of Guatuso Indian; Skull of Cærib, and other articles, from Costa Rica.

From Consul HUTCHINSON.—Eight Skulls from Rosario.

Mr. HUTCHINSON made some explanations respecting the six skulls presented by him to the Society this evening. They were obtained from a graveyard, through which a cutting had been made by the contractors of the Centro-Argentine Railway in Rosario, but no certainty could be arrived at by him as to whether they were the skulls of Argentines (the mixed race of Spaniards and Indians), or of pure Indians. Rosario, as a miserable hamlet, was founded in A.D. 1725, by Don Francisco Godoy and some of the Calchaqui Indians from the frontiers of Santa Fè. It had not much, if any, infusion of the foreign element in it until 1854; and the graveyard from which these skulls were taken had ceased to be a burial ground long before that period. Hence he inferred that they were the skulls of the people of the country. Their very curious anatomical formation demanded the attention of the craniologist.

Mr. LLOYD, of Norwich, exhibited some flint implements found near Downham, in Norfolk, and explained the nature of the localities in which they were discovered.

Dr. DONOVAN then read a paper *On the Fundamental Principles of Anthropological Science*, the conclusions of which were given in the three following propositions :—

Prop. 1.—That the inborn natural faculties of the mind, whether

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of an intellectual or an emotional class, depend on the brain alone for power to perform their functions ; or, in other words, that the brain is the sole physical condition, medium and organ of each and all of the Mental Faculties.

Prop. 2.—That the brain is not a single organ, acting as a whole in all its operations, but is composed of as many separate and independent parts, or organs, as there are separate and independent Mental Faculties.

Prop. 3.—That the brain is subjected to a law of *size* (which is a measure of power in all things, other conditions of power being duly considered,) and that its separate organs are subjected to like laws.

Mr. DENDY observed that Dr. Donovan had occupied a long time in telling the meeting what they all knew ; and that it would have been better if he had confined his remarks to the main questions, which were, whether the functions of the brain were single or multiple, and whether the size of it was an index of mental qualification. There would be no question that the brain was the organ of the mind, but in the paper Dr. Donovan had completely shunned his own speciality, and had avoided explaining how the quality of the brain is to be indicated by craniology. The attempt to measure the brain by measuring the skull was a perfect fallacy ; and by endeavouring to do so phrenologists were doing infinite harm to the science of the brain—*encephalology*. If they had confined themselves to the early teaching of Gall and Spurzheim, they might have done much good, but when they called craniology *phrenology*, and pretended from measurements of the surface of the skull to tell the quality of the mind, they did injury to the study of mental philosophy. If by measuring the skull they could ascertain the size of the brain, there might be something to be gained ; but it was impossible to measure the brain from the skull, not even its size. The complex condition of the brain was the point that anthropologists should study ; the mere size of it, he contended, could not determine the quality of mind, which depended on the quality and complexity of the convolutions. It was in the intricacy and multiplicity of the convolutions that the brain of man differed from that of the ape, for some apes have a brain relatively as large as the brain of men, but in the case of the ape it is deficient in the number of convolutions.

The REV. DUNBAR HEATH thought it was a fair subject for discussion, which had been raised in Dr. Donovan's paper, to consider what anthropology is ; and he had endeavoured to limit their enquiries to certain questions relating to the mind of man. But if they granted all that he asserted, he was of opinion they would not be one jot nearer towards understanding what man's mind or what anthropology is. Dr. Donovan had given an account of certain imaginings of Mr. Spurgeon and others, but they led to nothing, and gave no information. It was admitted that some external power put things into the mind, which Dr. Donovan said were due to cerebral excitement. But that was no explanation ; they were not an atom the wiser by it. Granting that all he contended for as to the separate functions of the brain were true, how would it explain the observed phenomena ?

Supposing, however, that it did teach something; he should be far from allowing Dr. Donovan's assumption that it was unnecessary to study anything beyond these organs. Were they to be debarred as anthropologists from doing what they now do, to acquire additional information? The whole of man was connected with many other things, besides the brain. The brain was fed by the blood, which might thus be said to contain the whole of man. So did the milk. They must, therefore, examine all those things. Then the blood flows in certain channels propelled by the action of the heart, which contained the whole of man quite as much as the brain does. Then, again, a mere fright will sometimes kill a child, who might be frightened to death by the sight of a white surplice. They would have to go to the phenomena of light, which impresses on the retina external forms, to explain such an effect. All these things were connected with the living man, and anthropologists should study savage races as well as anything else to enable them to gain a knowledge of the science of man, for there were differences in their brains, hearts and nervous systems. Anthropology, indeed, presented a vast field for enquiry, all parts of which should be studied, for all were connected with the faculties of man. It might be asked what is the faculty of man? The theologian says it is the soul; Dr. Donovan takes it to reside in the organs of the brain, and others consider the memory and other mental powers to represent the peculiar faculty of man. In his (the Rev. Dunbar Heath's) opinion, one of these things was as good as another, for they were all so closely connected that one cannot exist without the other.

Dr. COLLYER was of opinion that the shape of the brain is formed by the skull in all the races on the earth; and that the brain is the measure of power, must be received as a fact by all physiologists. On an examination of the brain of different persons after death, each one presented a different appearance, which might be regarded as the measure of power. The brains of negroes and those of white men were very different in texture as well as in anatomical structure, one being firm and close, and the other more loose. This measure of power in the brain was of importance in animals as well as in man. When there is no density in the brain there is a want of power, and that peculiarity subsists in the brains of all animals, from the highest to the lowest. All men of nervous power have dense brains. He said he had known Dr. Donovan for twenty-five years, and he admired his tenacity, and the bravery with which he had maintained the truth of his branch of mental study against all opposition. It had been ascertained that different kinds of animals have brains peculiar to themselves, and that the greater number of convolutions the more intelligent is the animal. It must also be admitted that diseases of different parts of the brain affected differently the actions of the mind. The separate actions of different parts of the brain were shown in dreaming; in which process strange things appear to be real, because during sleep the action of the brain is confined to a few organs. He contended that in a healthy brain the form of the skull is an indication of the form of the brain.

Mr. MACDONALD said the real question was, whether the mental condition of a man could be told by the measurement of his brain. He contended that it could, for he had often determined individual character by examination of the skull, and the results of his observations had been supported by facts.

Dr. DUDGEON said that Dr. Donovan's aim was to limit anthropological science to phrenology, which he emphatically termed mental physiology. He had requested answers to three questions, which he had himself answered affirmatively on a slip of paper he had put into the hands of members. The first of these questions was, "Is the brain the organ of thought?" To this every physiologist would reply that it was,—that thought was in fact a function of the brain. The second question was, are the faculties of the mind located in certain definite parts of the brain—the organs of the phrenologists? Physiologists were compelled to dissent from the doctrines of the phrenologists, for many facts had been observed that militated against the notion of the localization of the cerebral faculties. Thus all phrenologists agreed to place the intellectual faculties in the anterior lobes of the brain, but Trousseau in his *Clinique* mentions the case of an officer who got a bullet right through the anterior lobes of the brain from one temple to the other, and who survived the wound three months, during all which time he enjoyed the perfect exercise of his intellectual faculties. Again, perfect unanimity prevailed among phrenologists as to the cerebellum being the part of the brain that regulated the procreative faculty; but Cruveilhier gives a representation in his pathological anatomy of the brain of an idiotic girl, in which the cerebellum was nearly completely absent, and yet the girl was much addicted to onanism, the perversion of a function which the cerebellum is said to preside over. Again, M. Vulpian, in his work on Physiology, cites an interesting observation of a woman who was affected with erotomania or nymphomania, and in whom the cerebellum was found after death to have its grey substance completely atrophied. M. Flourens destroyed and removed the half of the cerebellum of a cock without affecting the procreative power of the bird. Certain facts lately observed seemed to favour the idea of the localization of one faculty of the brain. M. Broca first called attention to the apparent connexion of the faculty of expressing ideas by words with the posterior part of the third convolution of the left anterior lobe of the brain; for he found that when that part was the subject of disease, the patient was affected with aphasia or inability to express his wishes and thoughts by correct words. This observation was confirmed by several others. He did not know how far this would go to strengthen the doctrines of the phrenologists, for it was observed that disease of the corresponding part of the right side was unattended by aphasia. But subsequent observations by M. Vulpian at the Salpêtrière Hospital, threw doubts on this supposed localization of a cerebral faculty, for he found that in 9 cases where there was this lesion of the portion of the brain alluded to, five of the cases were affected with aphasia, and four were not. With regard to Dr. Donovan's third question, as to the size of the brain being an index

of the intellectual power, that could not be answered absolutely in the affirmative, for brains were subjected to diseases that increased their size but diminished their power; and it was well known that a brain of loose fibre and flabby consistence might be very large and yet its possessor no way distinguished for intellect. There was a Scotch saying that perhaps contained more truth on this subject than the dictum of the phrenologists—

“Muckle head and little wit,
Little head and not a bit.”

This saw seemed to give the preference to medium-sized heads, and he felt disposed to agree with it to a great extent. He had felt it his duty to make this protest against Dr. Donovan's phrenological conclusions, and to show why it was that medical men who were at the same time physiologists—and all medical men ought to be physiologists, for physiology was a most important branch of medical study,—could not assent to the phrenologists' doctrine of the localization of the cerebral faculties. To this end he had cited a few well authenticated facts, but there were hundreds of others of the same kind that might have been adduced, and that were familiar to all physiologists, and equally conclusive against the phrenological localization of the cerebral faculties.

Mr. Cox, alluding to the practice of the Indians of Vancouver's Island of flattening the heads of children by subjecting them to pressure, said that the Indians, with heads flattened in that manner, were quite as intelligent as the others who had their heads of the natural shape. In fact, a flattened head was considered a mark of superiority, the flattening process being only practised on the children of the chiefs. He thought that there were a great many other points besides the form of the brain to be taken into consideration as indications of intelligence; among other things the expression of the face should be taken into account.

Mr. BURNS made some observations in support of the general principles of phrenology which he said had been founded on the observation of facts, and he recommended that the Society should put phrenology to the test of experience.

Mr. MACKENZIE adduced some remarkable instances of small brains being accompanied with singular intellectual development. There were no doubt cases in which large heads produced great results; such cases might be seen in Goethe and Swedenborg—but Schiller and Shakespeare had moderate sized heads—while Dante's and the Greek heads were remarkably small. One instance was that of Fortunio Licetus, a writer of the sixteenth century, who was born very abnormally, but who lived till eighty. He produced as many as forty books, one particularly entitled *Gonopsychanthropologia de Origine Animæ humane*, bearing on the very subject of this evening's discussion. He regretted that he could not coincide in the conclusions of Dr. Donovan, nor in the teachings of the empirical science of phrenology.

Dr. DONOVAN said that at so late an hour he could not possibly reply to the objections made to the propositions of phrenology which he had put before the Society, but which he must say were not at all

properly discussed. He was glad to hear Mr. Dendy admit that the brain is the great mind organ, a fact which is by no means generally recognised. Why, he asked, do not sceptics resort to experiment as regards the power of a phrenological adept to delineate character from cranial development. For his own part he would not hesitate to take any dozen persons in that room, utter strangers to him, and write their characters from their cerebral organization. Unless anthropologists made the relations of mind and brain their chief study, their science could make little progress.

This being the last ordinary meeting of the session, it was adjourned to November 3rd.

2ND SEPTEMBER, 1868.

SPECIAL GENERAL MEETING.

DR. JAMES HUNT, F.S.A., PRESIDENT, IN THE CHAIR.

The meeting was convened by circular "for the purpose of considering and determining upon a Resolution, carried unanimously by the Council, recommending the expulsion from the Society of Mr. Hyde Clarke, for conduct calculated to injure the Society."

Dr. DUNCAN proposed the following resolution:—

"That a committee of five fellows of the Anthropological Society of London who are neither members of the Council nor friends of Mr. Hyde Clarke be nominated, that shall report to a Special General Meeting of the Society upon the general and financial condition of the Society."

The PRESIDENT ruled that the resolution proposed was irregular, and could not be put.

The question was then put to the meeting:—"That the report from the Council be now read," and was carried by 28 to 6.

The DIRECTOR accordingly read the same, as follows:—

Statement of the Director on behalf of the Council to Special General Meeting, 2nd September, 1868.

The Council consider Mr. Hyde Clarke's conduct renders him deserving of expulsion:—

1. For having committed to the public press certain complaints against the management of the Society, without previously stating them to the President, Director, or Council.
2. For having made statements injurious to the Society, without taking steps to ascertain their correctness.

They consider his conduct in these respects ungentlemanly, and that, therefore, he is not a fit person to remain a fellow of the Society.

They consider further that the following statements made in Mr. Hyde Clarke's letter of the 21st August show that his object in taking these steps was to injure the Society:—

1. "Many fellows have determined to leave your Society, and to join a society where they can pursue the study of science without being

exposed to the disadvantages attendant on being connected with the Anthropological Society of London."

2. "I wish to see the end of my money, being exempt as a contributory in case of a winding-up, and meaning also to fight out this matter to the last."

The Council are of opinion, therefore, that to Mr. Hyde Clarke, guilty as he has been of ungentlemanly and mischievous conduct, no other answer can be given than his expulsion from the Society; but in order to satisfy the minds of the Fellows, and of such of the public as Mr. Clarke's letters may have reached, as to the several questions involved in them, the Council have directed the following statement to be laid before you:—

MR. CLARKE'S STATEMENTS.

1. "I have received from you resolutions, professing to refer to a communication printed in the *Athenæum* of August 15. This is rather disingenuous, for the document was a letter from me to you, the receipt of which was acknowledged by your Director."

2. "I shall recapitulate the subjects for your information, for that of the Fellows, and for (*sic*) the public at large."

REPLY OF THE COUNCIL.

As Mr. Clarke has chosen to make his letter public, before a reply could be sent, it cannot be treated as a personal communication. The charge of disingenuousness, therefore, recoils upon Mr. Clarke.

The Council fail to see upon what ground Mr. Clarke appeals to the public, until he has first appealed from the Council to the Fellows, in the manner pointed out by the regulations of the Society.

First.—"That the *Anthropological Review* contains lampoons on those with whom we are in professed amity."

The Council has already denied that the paragraphs referred to are lampoons. They decline to interfere in the editorial conduct of an independent publication.

Second.—"That the *Review* is not the property of the Society."

The Council have in four annual reports referred to the fact of the independent position of the *Review*. For the last two years the whole of the accounts of the *Review* have been kept by Mr. Richards, of 37, Great Queen Street, as agent for the trustees of the *Review*, and these trustees have instructed him to pay over to the treasurer of the Society all the profits which may arise from the *Review* until the Society is free from debt. After that period they have declared their intention

Third.—"That it is not known who are the proprietors of the *Review*."

Fourth.—"That the Council has not reported to the Fellows with whom the agreement really has been made."

to apply the profits to the foundation of a medal. The *Review* is, however, not yet out of debt, and the consideration of the acceptance of the profits has been adjourned till that event takes place.

Fifth. — "That our liabilities have been caused by the *Review*. The total debt on the 31st December, 1867, was £1,400. You had in the four or five years of the existence of the Society paid the printer about £1,400 on the *Review* account."

The debts of the Society at the present date (deducting cash in hand) are £706 17s. The sum of £1,400, alleged to have been paid for the *Review*, includes the whole of the cost of printing the *Journal* of the Society for the five years. The advertising expenses form a very important item, and are paid in full by the *Anthropological Review*.

Sixth. — "That the proprietors of the *Review* received a preferential payment of about £1,400."

This is entirely erroneous. No preferential payment whatever has been made. When deduction is made as above for cost of *Journal*, the estimated amount paid for *Review* is £740, and for other publications (great and small) £2,583. The ratio of payments and liabilities for *Review* to gross payments and liabilities for printing purposes is, in each case, about one to five, which clearly shows that no preferential payments have been made on account of the *Review*.

Seventh. — "That the Council supplied until this year the non-paying Fellows with the *Review* and other publications, until stopped this year (*sic*) in consequence of my representations."

The regulations of the Society do not recognise any Fellows as "non-paying", except those under the 32nd Rule. All are bound to pay, and entitled to receive publications. The Council, however, in May, 1867 (not "this year," nor in consequence of Mr. Clarke's representations), resolved on their own responsibility, notwithstanding the rules, to cease the supply to members in arrear more than one year.

Eighth. — "That the non-paying Fellows were about as numerous as the paying Fellows."

The members who have actually paid their subscriptions for the year 1867 are 569 in number.

Ninth.—“That the non-paying Fellows were about 420, and the paying Fellows 450 [*sic*, 400 was the number stated in Mr. Clarke’s first letter.]”

The defaulters are about one-fourth.

Tenth.—“That a large debt of £1,000, or £1,700, has been incurred.”

The present liabilities of the Society up to this date amount to £706 17s. In relation to this question, the Council think it due to one of their Fellows, their principal creditor, Mr. Richards, printer, to acknowledge the generous public spirit with which he has met the demands for forbearance that have been rendered necessary by the negligence of the Fellows in arrear. They think it right also to mention that Mr. Richards recently offered to contribute £50, if nine other Fellows would do the same, for creating a fund to relieve the Society entirely from its obligations.

Eleventh.—“That in 1867 a *dummy* President was nominated. For 1868 Dr. James Hunt caused himself to be elected President.”

Captain Burton, when elected, was expected home on leave of absence, and would certainly not have proved a “dummy” President, whatever that may mean. Dr. James Hunt consented to act as President for 1868 upon the following requisition, signed by all the members present at the Council Meeting, held 31st Dec., 1867:—

“TO DR. JAMES HUNT.

“We, the undersigned Members of the Council of the Anthropological Society of London, having taken into consideration the history of the Society’s operations during the past year, desire to express to you our opinion that it is most desirable that you should return to the position you so ably and successfully filled during the first four years of the Society’s existence.

“We, therefore, take the present occasion of stating this to you in writing, and we most strongly urge upon you the acceptance of the office.

“(Signed),

“D. I. HEATH.

“S. E. COLLINGWOOD.

“RICHD. S. CHARNOCK.

“EDWARD W. BRABROOK.

“J. W. CONRAD COX.

“WILLIAM TRAVERS.

“H. BEIGEL.

E. VILLIN.

SAML. R. I. OWEN.

HENRY G. ATKINSON.

RICHARD KING.

BEDFORD PIM.

BERTHOLD SEEMANN.

JOHN M. HARRIS.”

Twelfth.—“That Fellows have been touted for in a manner unexampled in scientific societies.”

The Council do not care to inquire into what is meant by “touted for,” but will continue to do all in their power to promote the increase of the Society by the admission of persons suitable to become Fellows.

Thirteenth.—“That such new Fellows have left the Society, and that the cause is deserving of inquiry, as it is (*sic*) to the number of 300 or 400.”

That any considerable number of Fellows have left the Society within a short period is untrue. The resignations, from various causes, amount in number to 244, and have been spread over the period of five years. In each year they have been more than compensated by new elections.

Fourteenth. — “That, most likely (*sic*), Fellows have been elected who did not give their consent.”

No Fellows have been elected without a proper nomination, as provided by the regulations. For this the proposer is responsible.

Fifteenth.—“That the abandonment of the *Review* is a measure of justice and imperative economy.”

The Council consider that the *Review* has been of the highest service to the Society and to the science of anthropology. The present arrangement with it is more economical than any that could be devised, inasmuch as the quarterly publication of the *Journal* alone, of the same size as the *Review* and *Journal*, would cost as much as is now paid for both.

The *Review* is the only medium of intercommunication for anthropologists, wherever resident.

The Council have declined to accept the copyright of the *Review*, to avoid pecuniary responsibility.

Mr. Hyde Clarke resumes:—

1. The proprietors of the *Review*: who are they?

This is the sixth time of Mr. Clarke's repeating this irrelevant question. In reply to the insinuation it conveys, the copyright, more than once declined, is still offered to the Society. When profits do accrue they will be applied for its benefits.

2. "I shall be very glad to learn that any profits have ever been paid over in five years" (arising on the sale of the *Review*).

The Council are able to state upon authority that the trustees of the *Review*, so far from having earned profits, have, up to this time, published the *Anthropological Review* and *Journal of the Anthropological Society of London* at a pecuniary loss.

3. "That your payments are improvident, that they are in excess, and ought to be refunded."

For the reasons already stated, the payments for *Journal* and *Review* have been advisable, and are not in excess.

4. "That it will be with the public to give the verdict whether the charlatanism, puffery, and jobbery of the Anthropological Society of London shall be rebuked."

The above answers are sufficient to show that the imputation of "jobbery" is an atrocious calumny. The remainder of this paragraph the Council decline to notice.

5. That he "had no opportunity of ascertaining the real facts while acting on the committee for amalgamation on behalf of the Ethnological Society."

Mr. Clarke, it is quite true, left the first meeting of that committee early; but not before he had been informed of many of the facts above set forth.

6. "That two of your then delegates, your President and Director, have not redeemed their pledges of resignation given to Professor Huxley."

The President and Director fully redeemed their pledges of resignation. They reluctantly resumed office at the express desire of every member of Council present at a large meeting, for reasons which the Council considered fully justified them in so doing.

7. "You talk of expelling me from the Society, and fining me the sum of twenty guineas."

The Council have legally no power on their own motion to return the unexpired portion of Mr. Clarke's composition; but they will be happy to do so if the meeting should resolve to give instructions to that effect.

8. "I am acting within the limits of my rights as a Fellow. You determine on my expulsion for stating facts furnished by yourselves, and which (*sic*) you cannot refute."

No Fellow is entitled to act as Mr. Clarke has done. He has not stated facts, but falsehoods. It is not, however, proposed to expel him on this account only, but for his unfair and mischievous conduct.

9. "Several members of your own Council wish to quit the Society, and discharge themselves from liability."

None of these members of Council (if there be any such) have attended either of the two very full Council meetings, at both of which Mr. Clarke's conduct has been discussed and unanimously condemned.

10. "I am probably still enrolled under some idle designation in the category of your numerous hierarchy of office-bearers without functions."

On February 6, 1867, Mr. Clarke offered his services as "Corresponding Secretary for Asia," and suggested that five others, "six honorary functionaries in all," should be appointed. On February 4, 1868, the Council resolved not to continue him in that office.

11. "Your honorary membership has been rejected with contumely."

The honorary membership of the Society has never been rejected either "with contumely" or otherwise.

12. "I require the publication of this in the *Anthropological Review*." x

Mr. Clarke himself having made it a charge against the Council that they have no control over the *Anthropological Review*, must know that they have no power to cause his letter to be inserted there.

Taking all the foregoing circumstances into consideration: recollecting that the same day that Mr. Clarke penned these heavy charges against the Council, he forwarded them for publication to the *Athenæum* newspaper; that he chose the very time appointed for the sitting of the British Association for his attack, knowing that it would give rise to remark and conversation, without the possibility of a reply on the part of the Council; that he is a member of Council in another Society, and has made the affairs of this Society matter of disparaging discussion at that Council Board; that he does not hesitate to advocate secession from this Society to that; and that he has published information to the world with such aggravations and false circumstances as utterly disguise and destroy the truth of it; the Council feel that Mr. Clarke has shown himself unfit for the Fellowship of the Anthropological Society of London.

After a long and stormy discussion, Mr. Hyde Clarke was called upon for his reply to the statement of the Director. On his refusing to make any reply, the President declared the ballot open, and appointed Mr. Bendyshe and the Rev. Dr. Kernahan scrutineers.

While the ballot was being taken, the question was put to the meeting—"That a vote be now taken on Dr. Duncan's resolution," and was carried in the affirmative.

Dr. Duncan's resolution was thereupon put to the meeting, and carried by 22 to 13, many members of the Council voting for the same.

The Scrutineers then reported the result of the ballot as follows:—

For the expulsion of Mr. Hyde Clarke	26
Against	16

Mr. Hyde Clarke was thereupon declared not to be expelled, the rules of the Society requiring a majority of three-fourths of the members present to vote for the expulsion of a Fellow.

Official Reports of the President and Director of the Anthropological Society of London respecting the Failure of the Negotiation for the Amalgamation of the Ethnological and Anthropological Societies.

Anthropological Society of London,

4, St. Martin's Place, August 7th, 1868.

I beg to lay before you a report of the recent negotiations between the official delegates of the Ethnological and Anthropological Societies with a view to effect a union of the two Societies:—

The desirability of a union on a rational basis between the above-mentioned Societies having been long felt and acknowledged by those most deeply interested in the science of man, I learned with satisfaction that Professor Huxley was nominated President of the Ethnological Society, believing that under his auspices the amalgamation, which I understood to be the general wish on the part of the Fellows of the Ethnological Society, would stand a fair chance of being effected. I therefore called on Professor Huxley to assure him of my readiness to render him my best services in forwarding the scheme of union with us, which I understood he had in view. Professor Huxley stated, in reply, that he was on the point of writing to me on the subject had I not called. Only some preliminary conversation passed between us then; but a few days later I received a letter from Professor Huxley, asking me to put on paper such conditions as I thought would be acceptable to the Fellows of the Anthropological Society of London.

I acceded to this request, and drew up the following conditions. At a second interview with Professor Huxley shortly after, these conditions were discussed, and several modifications suggested, which will be found in his handwriting:—

COPY OF ORIGINAL DRAFT.

Professor Huxley's amendments in italics.—Preliminary terms of union which have received the sanction of the Presidents of the Ethnological and Anthropological Societies, and submitted by them to their respective Councils.

1. "*No alteration.*"—That it is highly desirable in the interests of

science that the Ethnological and Anthropological Societies should be united.

2. *Three for six. Add: "Nominate officers and Council."*—That, with a view to effect such union, a committee of six members of each Council be nominated to draw up terms of union and regulations.

3. *"No alteration."*—That, on receipt of such terms of union and regulations by the respective Presidents of the two Societies, a general meeting of each Society shall be called within fourteen days to consider the same.

4. *"While the United Society adopt the name of the Anthropological Society, unless a better can be found."*—That, with a view of facilitating the proposed amalgamation, and of removing obstacles from its accomplishment, the committee be instructed to base the rules of the United Society as far as possible on those of the Ethnological Society; while the name of the United Society be assimilated to that of the Anthropological Society.

5. That a sum not exceeding one-third of the annual income derived from present Fellows of either Society shall be put aside to defray any debts that may exist in such Society.

6. *"Dele."*—That when the terms of union are agreed on by the joint committee, a meeting of the Councils of the existing Societies be called to nominate officers and Council for the United Society, and to fix a day for a general meeting of the Fellows of both Societies.

7. *"That a general meeting of each Society shall be called for the purpose of accepting the terms of union agreed upon by the before-named committee."*—That such general committee shall consider and decide on the organisation and name of the United Society.

8. *"Dele."*—That Professor Huxley be President of the Amalgamate Society, and preside at such meetings, and the officers nominated conduct the business of the same.

9. *"That the Councils of the respective Societies undertake to use their best efforts to carry out the recommendations of the Committee."*

It was on this occasion that Professor Huxley assured me that his object in consenting to take the Presidency of the Ethnological Society was chiefly to promote a union with the Anthropological Society, and should the terms he and myself had agreed upon not be accepted by his Council, I understood him to say, he should resign the office of President.

I pledged myself to the same course, as did also Mr. Brabrook, your Director, when, on the same day, I discussed the matter with him.

The conditions (as amended by Professor Huxley) were now laid before our Council, and at a full meeting, specially summoned to consider the question, were passed after due discussion; Professor Huxley's assurance to me of his intention to resign the Presidency of the Ethnological Society in the event of his Council refusing to accept the conditions of amalgamation agreed on by him and myself, was accepted as a guarantee of good faith, and of a sincere intention on his part, at least, to effect the union on purely scientific considerations.

"Preliminary terms of union which have received the sanction of the

Presidents of the Ethnological and Anthropological Societies, and are submitted by them to their respective Councils, and agreed to unanimously by the Council of the Anthropological Society of London :—

1. That it is highly desirable in the interest of science, that the Ethnological and Anthropological Societies should be united.

2. That, with a view to effect such union, a committee of three members of each Council be nominated, to draw up terms of union and regulations, and nominate officers and council.

3. That, on receipt of such terms of union and regulations by the respective Presidents of the two Societies, a general meeting of each Society shall be called within fourteen days to consider the same.

4. That, with a view of facilitating the proposed amalgamation, and of removing obstacles from its accomplishment, the committee be instructed to base the rules of the United Society, as far as possible, on those of the Ethnological Society. While the United Society adopt the name of "The Anthropological Society of London," unless a better can be found.

5. That a sum, not exceeding one-third of the annual income derived from present Fellows of either Society, shall be put aside to defray any debts that may exist in such Society.

6. That a general meeting of each Society shall be called for the purpose of accepting the terms of union agreed upon by the before-named committee.

7. That the Councils of the respective Societies undertake to use their best efforts to carry out the recommendations of the Committee."

At a Council of the Anthropological Society of London, held the 2nd day of June, 1868, it was resolved unanimously,—¹"That the foregoing resolutions, embodying preliminary terms of union, are approved and adopted by this Council."

"That Dr. Hunt (President), Mr. E. W. Brabrook (Director), and Mr. C. Robert des Ruffières, be the committee, under Resolution II, to meet the committee of three to be appointed on behalf of the Ethnological Society."

A copy of the resolutions agreed to by our Council was then sent officially to Prof. Huxley. A telegram received from our secretary informed me, however, that the Ethnological Council had not agreed to those resolutions, although favourable to the principle of amalgamation; they had, therefore, appointed a committee to discuss the matter with us.

On hearing this news, I wrote in the first instance to request Mr. Bollaert (who had consented to act as deputy in the matter), to meet, as a matter of courtesy, the delegates of the Ethnological Society. I, however, decided afterwards, that it would be best for me to go to London myself, to do what I could to act in concert with Professor Huxley, and overcome the objections of his Council.

The delegates informed us, at our meeting with them, that they had no power to treat with us, and that the Council of the Ethnological Society had declined to negotiate on the proposed basis until they had obtained further particulars respecting our finances. A full statement of our financial position was at once furnished, and was considered

satisfactory ; and the delegates of the Ethnological Society's Council unanimously agreed that no further objections would be raised on the score of finances.

There were present on that occasion, two members of the Ethnological Committee, Professor Huxley and General Balfour ; a third member, after an attendance of half an hour, was compelled to leave to, as he stated, "reorganise the Statistical Society."

A discussion then ensued as to the name of the amalgamated society. The proposition that it should bear the name of "The Anthropological Society of London, unless a better could be found," was objected to, we were informed, by the Council of the Ethnological Society, although Professor Huxley stated that he had informed his colleagues that on scientific grounds there was really no other preferable. He added that, although objections, other than scientific, might be brought against the name, on purely scientific grounds he could not suggest another ; and that we ought to consider the name, perhaps, rather from a political than a scientific point of view. After the objections raised by his colleagues, many of which were deserving of most respectful attention, Professor Huxley could not further urge the name Anthropology. He added, that there was a precedent in the Linnean Society, after an acknowledged master of students of the science ; and he suggested that the name of Retzius, Blumenbach or Prichard, should be incorporated with the amalgamated society. This being objected to by myself and colleagues, and no decision having been arrived at respecting the name, it was decided to adjourn the meeting, leaving all points settled in principle but that of the name.

Another meeting of your delegates was held, and it was felt to be useless to propose to you any of the names indicated by Prof. Huxley. I was requested to convey this decision to him. On the following day I had a long interview with Professor Huxley, during which he put the case to me so strongly that, although reluctantly, and with many misgivings as to its policy, I consented to propose some other name than that of the "Anthropological" Society. We agreed, therefore, after some further discussion, upon this title : "The Society for the Promotion of the Science of Man." I, at the same time, observed to Professor Huxley more than once during our interview, that although pledging myself to agree to this compromise rather than suffer the union to fall to the ground, I felt it to be unscientific, and not likely to be a name that would last long ; and that I should feel myself at liberty, after the union had been effected, to propose any alteration of name that I thought advisable, and that I merely agreed to the change of name as a means to an end. Professor Huxley remarked that this was a question he would rather not discuss.

I then went with Professor Huxley to call on Mr. Brabrook, who agreed to what was proposed, and added, that he thought it might be carried on our Council, a point on which I then stated I did not feel equally sanguine. I stated to Mr. Brabrook, as I had before done to Professor Huxley, that should the Council of the Anthropological Society of London refuse, as I thought highly probable, to adopt the proposed name, it would make it incumbent upon me to resign my

office of president. Mr. Brabrook said, that in such an event, he should also feel called upon to relinquish the office of director.

The name proposed for the joint society, viz., "The Society for the Promotion of the Science of Man," was accepted by the Council of the Ethnological Society, and rejected by the Council of the Anthropological Society.

Resolutions passed at a Council, 16th June, 1868.

DR. HUNT, PRESIDENT, IN THE CHAIR.

The PRESIDENT having submitted to the Council a proposal on behalf of the Committee, that the new amalgamated society be called "The Society for the promotion of the Science of Man," which was seconded by the Director, and every Member of the Council present having been called upon to express, and having expressed his opinion on the same,—

The Rev. DUNBAR HEATH proposed, and Dr. SEEMANN seconded, the following amendment:—

"That the existence of flourishing societies under the name of Anthropological Societies, in several of the capitals of Europe, is in itself sufficient reason to prevent this Society acceding to a change of name."

Carried by fifteen votes to four.

Captain PIM moved, and Dr. KING seconded the following resolution:—

"That the name recommended by the Committee, 'The Society for the promotion of the Science of Man,' is not a better name than Anthropological, and that the Council of this Society do not consider such a change desirable; but they are quite willing to leave the selection of the name for the joint society to the vote of a combined general meeting of both Societies."

Carried, one vote being recorded against it.

The Council then adjourned for a few minutes, while this intelligence was taken to Professor Huxley by myself, the Director, and Mr. Robert des Ruffières. Professor Huxley, on hearing the amendments that had been carried, at once declared that the negotiations were at an end, and that, for the future, he should work all he could for the Ethnological Society.

On the same day, June 16th, 1868, Mr. Brabrook and I resigned our offices. An adjournment of the Council was carried, however, without our resignations being accepted or our successors nominated.

Three days later, another meeting of the Council was summoned, and my resignation accepted and successor elected. The same day Mr. Brabrook's resignation was also accepted.

Resolutions passed at a Council Meeting, 19th June, 1868.

Resolved,—“That the resignations of Dr. Hunt, as President, and of Mr. Brabrook, as Director of the Society, be accepted.”

Resolved,—“That Dr. J. Barnard Davis, F.R.S., be elected President of the Society.” (Carried unanimously.)

Dr. Davis having taken the chair, the last two resolutions were rescinded, and the following resolution, proposed by Capt. PIM, and seconded by Mr. Vaux, was adopted :—

“That the resignation of Dr. Hunt, as President of this Society, be not accepted, his services being of such importance to the Society, that they cannot be dispensed with.”

A similar resolution was passed respecting the resignation and value of the services of Mr. Brabrook.

In closing this report, it is only necessary for me to add that during the whole of these negotiations, a most earnest desire was expressed on the part of Professor Huxley to bring these negotiations to a successful termination. I had over and over again told Professor Huxley that I did not believe a general body of Fellows, or even a meeting of Council would agree to a change of name. On proposing it, therefore, I did not feel it my duty to do more than tell the Council that if they wanted union, they must consent to a change of name, and that I was bound to recommend this course. I suggested this on purely public considerations; and under such circumstances did not feel it my duty to use any other inducements either for or against such a proposal. I need now only add that, up to the time the intelligence was conveyed to Professor Huxley, that the Council of the Anthropological Society of London had declined to recommend to the Fellows a change of the name of the Society, he expressed a most friendly disposition and sympathy towards the aim and objects of the Society. It was only after hearing the decision of the Council of the Anthropological Society of London, that Professor Huxley announced to us that for the future he should work all he could for the Ethnological Society.

As on that occasion I omitted to express how pleased I was to hear such a statement, I take this opportunity of saying I cordially congratulate those who have been victorious in this matter, that they have been instrumental in inducing Professor Huxley to devote his future time and talents to an important branch of anthropological science.

(Signed)

JAMES HUNT,

President of the Anthropological Society of London.

P.S.—Since writing the foregoing, my attention has been called to two mutually destructive assertions made by Mr. Hyde Clarke, one of the delegates of the Ethnological Society. 1st, That the negotiations were broken off on financial grounds. 2nd, That I (in some way not mentioned) frustrated the negotiations. It must be for the Council to decide on the evidence adduced as to the truth of the first statement. There are, I believe, only two alternatives in this matter. Either Mr. Clarke stated that which he must have known to be false, or his powers of stating events as they really occur must be very defective. With regard to the charge against myself, I leave that to the memory of the twenty-one members of the Council who attended and voted on the question. They will be the best judges in such a matter. The Council of the Society are already in possession of evidence that Mr. Hyde Clarke has informed several persons that the negotiations failed on financial grounds. On the 5th of August last, I heard him

make such a statement myself. I then told him that he was suffering under a great delusion, and called his attention to the fact that he was present when the negotiations were broken off, and that he heard the resolutions of the Council of the Anthropological Society of London read, and that in reply to Professor Huxley he agreed that as the name proposed had not been accepted, the negotiations were at an end. The charge of wilfully stating what he knew to be false, with intent to injure the Anthropological Society, I trust for the credit of all concerned may not be proved against him.

I also take this opportunity of saying that another statement which Mr. Hyde Clarke has published is erroneous.

Mr. Hyde Clarke asserts that the question of who should sit on the council of the amalgamated society "was left by Dr. Hunt to the decision of Professor Huxley." I affirm, on the contrary, that the subject of the composition of the amalgamated council was, to the best of my belief, never discussed by myself and Professor Huxley until after the negotiations were finally broken off. We had several conversations respecting the best persons for officers; but none, as far as I can remember, respecting the composition of the council. Mr. Hyde Clarke's charge in this matter, I suppose, is based on what I said to Professor Huxley in the presence of the two committees when we were just about to withdraw. Professor Huxley said that if the name had been agreed on the matter would have soon have been all settled, and he thought it highly probable that a part of the organisation of the amalgamated society would be taken from the Anthropological Society. In reply, I said that we were only acting in the interests of science, that we merely desired a really good scientific society, and that we were prepared to leave the selection of the names of the amalgamated council to Professor Huxley, had the original terms agreed on between us been strictly adhered to. It is only right I should here add that Professor Huxley considers that these original terms have been kept to by himself, and that taking all the circumstances of the case into consideration, the title, the Society for the Promotion of the Science of Man, is a better one than that of the Anthropological Society of London. I feel sure that none more deeply regret than both Professor Huxley and myself do that these negotiations for a union have come to an end.

J. H.

Report of the Director as to the Negotiations for Amalgamation with the Ethnological Society.

1. The Council did me the honour to appoint me one of a committee of three, on whom they conferred full power to act in the matter of the proposed amalgamation, as set forth in the paper prepared by the Presidents of the two Societies, and to meet a committee to be similarly empowered on the other side.

2. The Council of the Ethnological Society did not appoint a committee with power to act, but merely to treat with us, and report to their Council.

3. We, however, met the committee so appointed, and went with them fully into the two questions they made vital, viz, finance and the name.

4. The question of name was referred to Professor Huxley and to Dr. Hunt to settle; that of finance to General Balfour and myself.

5. I had several interviews with General Balfour, and handed over to him in writing a statement of the condition of our finances, and of my views on that question. These were accepted by him, and as he afterwards informed me by his council, as being perfectly satisfactory; he assured me that all difficulty on that point was at an end. Indeed, I think it my duty specially to acknowledge the very handsome manner in which I was met by General Balfour during the whole course of these negotiations.

6. Dr. Hunt had a long interview with Professor Huxley on the question of the name, and afterwards called upon me at my chambers, when they informed me that, for the sake of peace, and as a temporary expedient, Dr. Hunt had consented to propose to the Council the adoption for the United Societies of the name, "Society for the Promotion of the Science of Man." Impressed with the same considerations, and feeling strongly desirous of seeing the amalgamation carried into effect, though I did not fail to mention and to weigh the obvious objections to the name proposed, I agreed to it, and went so far as to say that I thought the Council of the Anthropological Society of London would also agree, in which statement, as the Council are aware, I was entirely mistaken.

7. The Ethnological Society met on the day before that appointed for the meeting of our Council, and then, for the first time, gave their committee power to act.

I had an interview with that committee the same evening, and having heard that some of the Council of the Anthropological Society of London entertained strong objections to the proposed name, I informed the committee of the Ethnological Society that I expected it to meet with opposition. Upon this, Mr. Hyde Clarke, one of their committee, and still a Fellow of your Society, made the following outrageous remark:—"They had better consent; your Society are in the position of toads under a harrow, and Professor Huxley has come to your deliverance." Though I was deeply incensed at this, I was so anxious that no subordinate question should interfere with the accomplishment of an object that I much desired, that I refrained from resenting the remark, or reporting it to you at the time. My forbearance, it would seem, has only encouraged this person to further outrages.

8. When the Council of the Anthropological Society of London resolved by fifteen votes to four not to agree to the name proposed, we communicated that resolution to the committee of the Ethnological Society, who said, emphatically, that all the questions were at an end, and that they had full power to have completed the amalgamation if the name had been conceded, but not otherwise.

9. I am able to state, therefore, from personal knowledge, that any statement as to the proposed amalgamation having failed on financial grounds, or that it was frustrated by Dr. Hunt, is utterly untrue; and that any such statement coming from a member of the committee of the Ethnological Society must be wilfully untrue.

The amalgamation came to an end because,—

1. The Council of the Ethnological Society would not adopt the name of the Anthropological Society of London, and could not find a better.
 2. The Council of the Anthropological Society of London would not confirm the variation from the agreed terms in respect to the name to which the committee had provisionally assented.
- and for no other cause whatever.

(Signed)

EDWARD W. BRABROOK,
Hon. Director of the Anthropological Society of London.

September 14th, 1868.

Report of Mr. Robert des Ruffières on the Failure of the Amalgamation Scheme.

Wilmot Lodge, Rochester Road, Camden New Town,
September 23, 1868.

MY DEAR SIR,—I have to acknowledge the receipt of your letter under date of the 21st inst., together with the official report respecting the failure of the negotiation for the amalgamation of the Ethnological and Anthropological Societies. In my letter to Mr. Brabrook of the 1st inst., I distinctly stated that the negotiation for the union between the two societies broke down on the subject of the name to be given to the incorporated societies, and that questions of finance had nothing whatever to do with the matter. Such, I believe, was also the impression of every member present at the council meeting held on the 16th of June last. I really have little more to add to this statement, except that the reports appear to embody the principal facts bearing on the late negotiation, which I sincerely hope, on a calm perusal, will bring about a better understanding between all parties.

I have had a sharp attack of bronchitis, which has almost confined me to the house for the last six weeks. I am very anxious to get out of town, and hope to do so in a day or two.

I remain, dear Sir, your faithfully,

C. ROBERT DES RUFFIÈRES.

Dr. James Hunt.

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